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THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. II.

HAMILTON, NOVEMBER 1870.

No. 11.

Editorial.

QUEBEC PROVINCIAL EXHIBITION.

[The following notice was unavoidably crowded out of our last issue.]

Our sister Province of Quebec had successful Exhibition in Montreal, commencing Sept. 13th. It was held on the new fair grounds northwest of the city, at the base of Mount Royal, where temporary structures have been erected, and a variety of excellent improvements in the way of fencing, levelling, and draining commenced. When put in complete order, this will be a most convenient spot for future Exhibitions.

On the whole the Show appears to have been a very successful and creditable one. In the horse classes, nearly two hundred entries were made, and a number of superior animals exhibited, mostly of the Clyde, Percheron, Normandy, Suffolk, and Canadian breeds. There were three imported stallions that attracted special attention; a Percheron owned by Mr. Wright of L'Assumption; a Suffolk imported by Mr. M. H. Cochrane, but now owned by the Huntingdon Live Stock Importing Society; and a "Coaching Stallion" imported by Mr. Hyndman, but now owned by the Society just named. The cattle classes were also well filled, and many choice specimens exhibited. In Short Horns, as might have been expected, Mr. Cochrane distanced all competition. His contribution to the Show consisted of nine recently imported animals, which though not the pick of his herd, are splendid creatures, looking remarkably well, although some of them had but just come off a sea voyage. The costliest of his animals, viz: Duke of Thorne-dale, Duchess 97, and Lady Grateful, the last named of which cost the immense sum of 1500 guineas were prudently left at home, it being hazardous to expose such precious freight to the uncertainties and risks of railroad journeying. The Ayrshires were in considerable force, the chief exhibitors being Messrs. Gibb, Whiting, Dawes and Irving,

all of whom have made valuable importations of these excellent dairy cattle. There were seven entries of Herefords, all good specimens of this too little appreciated breed. A few Devons were shown, but this class was not well represented, except by the prize-takers. Four ordinary-looking Galloways were on the ground. A fine lot of Jerseys, four males and seventeen females, were exhibited by Mr. Sheldon Stephens. Two prizes were given for the best herd. The first or Prince of Wales prize of \$60 was won by Mr. Cochrane, for his herd of Short Horns; the second, offered by the Bureau of Agriculture of \$50 was awarded to a herd of Ayrshires. There was a creditable display of sheep. Here as among the cattle, Mr. Cochrane was king. His magnificent imported Cotswolds were well represented, and some corn-bred sheep, bred by an admixture of Cotswold and Leicester blood, showed to good advantage. Of pigs there were 118 pens. The Suffolks and Yorkshires predominated as to number and were of good average quality. The Berkshire class was well filled, having in it some recent importations by Mr. Cochrane, of superior quality. The Poultry department was pretty well filled. Among the most noticeable of the birds were the imported Dark Brahmas exhibited by Mr. Sheldon Stephens. The array of implements was not so extensive as it might have been. Evans & Co were the chief contributors to this department. Messrs. Bulmer and Sheppard of Montreal, showed a brick machine in actual operation, which attracted much attention; so did also a small steam engine and screw, designed for a small propeller. The show of grain, roots and dairy products, was rather meagre, as was also the Industrial Department. In the latter Messrs. Forsyth and Mavor's assortment of domestic and monumental marbles were conspicuous. It also comprised a display of stoves and hollow-ware, some good specimens of carriage-work, a variety of sewing machines, and a lot of excellent household furniture. The Exhibition was a good and successful one, though held under difficulties arising out of the newness of the grounds, and the make-shift style of the buildings. It attracted an encouraging attendance, and will doubtless, if managed well, improve in all respects on coming occasions of the kind.

AMERICAN STATE FAIRS.

We cull from our American Exchanges a few particulars respecting some of the State Fairs.

NEW YORK STATE FAIR.

Of this the *American Farmer* speaks as follows:

The Thirteenth Annual Fair of the New York State Agricultural Society, recently held at Utica, was among the most successful of the series. The location was excellent, the weather auspicious, the entries quite numerous, and the daily attendance fully up to expectation. In the stock department there was, perhaps, a falling off in numbers as compared with some previous exhibitions of the society; but, in point of excellence, especially in the line of cattle, it was second to none, if not superior to any preceding one. The exhibit of horses was very full, and of marked excellence generally. The limited space at our command will not permit even a reference to the many fine animals in this department. Sheep had a limited representation. Swine did better—excelling many displays in this line. Poultry was out in force, and the show one of general excellence. Dairy products, considering the point of exhibition, did not make an imposing display, though the samples were individually good, and creditable to the producers.

In the floral department the exhibit was unprecedentedly large and good. The more prominent exhibitors were James Vick, Ellwanger & Barry, Briggs & Brother, Rochester; Henry Wager Utica, and Mrs. T. Van Namee. J. W. Alexander, of Utica, carried off the honors in greenhouse plants.

The fruit show was good, embracing the usual varieties grown by professionals and amateurs. E. W. Sylvester, of Lyons, was strong in apples and well up in pears. In respect to the latter, Messrs. Ellwanger & Barry made the best show, and were not behind in other fruits. Fine grapes were presented by F. L. Parr, Canandaigua; L. M. Ferris & Son, Poughkeepsie; Stephen Underhill, of Croton Point, and several others. Financially, the fair was quite up to the expectation, the receipts being about \$20,000.

WESTERN NEW YORK FAIR.

Our New York neighbors have had a "Western Fair" as well as ourselves. The *American Farmer* says of it:

Although strictly, and perhaps legally speaking, we should call the Exhibition just closed on the fair grounds at Rochester, the Monroe County Fair, the great interest taken by people from abroad who took part, fully justifies us, we think, in using the heading given to this necessarily meagre sketch—made up, as it is, in a hurry, after the first side of our paper is in press, and the printers crowding us for copy.

To say that it was a great success, is but to repeat again what all the Rochester papers have said, as well as the oft-repeated exclamation of many thousands on the grounds.

The weather on the first—or entry day—was unfavorable, and undoubtedly kept many from entering who would have otherwise exhibited implements or stock. Notwithstanding this, the entries were larger and more varied than ever before, taking the word of those who had been connected with the previous fairs, and acquainted with the history of the society from its commencement.

The second day of the fair was all that could be desired for weather, and the crowds on the ground unprecedented.

The third day of the fair opened auspiciously. The report had gone out through the pleased thousands who visited the grounds on the previous day that there were new things to be seen there—something more than the old worn-out articles that had been carted to the county fair and back again, year after year; that there was to be a grand procession on the track, trials of speed, female equestrianism, trial of skill in playing between four first-class bands, &c. Another great crowd thronged the grounds to enjoy all these promised attractions—and none, we believe, went away dissatisfied. The procession, consisting of the town teams, premium stock, horses, &c., with four bands at regular intervals, reached entirely around the half-mile track, making a splendid show. Immediately after this the Annual Address was delivered by Prof. A. A. Hopkins, and listened to with marked attention by a large number. The address and its delivery were capital, meeting with the hearty approval of the audience.

We are indebted to the *Rural New Yorker* for the following notes:

THE IOWA STATE FAIR,

At Keokuk, is pronounced a success this year—1,500 more entries having been made than last year. The Cattle exhibit embraced the best herds in the State, and some from Illinois and Missouri; Swine were largely represented; Sheep in not so large numbers, though a creditable exhibition was made; Horses—and good ones—were numerous; the Implements show rather meagre; fair Fruit exhibit, but not the usual good quality.

THE MICHIGAN STATE FAIR

It is said to have embraced a larger exhibition than last year, the number of entries being 2,499—199 more than the last fair. The attendance was large, and especially from neighboring States. The show of Horses and Cattle was large and excellent; of Sheep and Swine comparatively meagre; Domestic Manufactures, Ladies' Contributions, Implements, Machinery, and Fruit, it is reported, were largely represented.

PENNSYLVANIA STATE FAIR.

This fair, at Scranton on the 27-30th ult., was in most respects creditable to the agricultural and other interests of the Keystone State. The contributions of stock were fair in number and excellent in quality. E. Cornell of Ithaca, N. Y., sent the flocks of his celebrated stock of Short-Horns, and the range from other exhibitors included Short-Horns, Devons, Alderneys, Jerseys and grades including some very fine cattle. The show of Horses was large, and of a superior quality. Swine were not very numerous, nearly the whole stock being Chester Whites, the property of one exhibitor. Of Sheep, there was one pen of American Spanish Merino, and several Cotswolds and South Downs. The exhibition of Fruit was very fair, including that of the Cumberland Co. Horticultural Society, mentioned elsewhere. John Walsh of Ithaca, N. Y., showed 60 varieties of very fine apples, and 30 of pears, the balance being made up of many minor contributors. Grapes were abundant, very many being from Naples, N. Y., and vicinity, as well as from home contributors. Very superior hot-house

grapes were exhibited by a lady of Scranton, and Mrs. Clay of Clarksville. Grains and vegetables were also abundant, the larger contribution coming from Pennsylvania Agricultural College farm.

The *West* Rural thus reports for Illinois and Wisconsin:

ILLINOIS STATE FAIR.

The Illinois State Fair, held at Decatur last week, as an exhibition in its various departments, eclipsed by far anything of the kind heretofore held in the State. The arrangements and appointments for a large display were very much better and more complete in some particulars, than last year, and the wisdom of the management in this direction, as well as in the increased value of the premiums in important divisions and classes, was prominently evident in the increased number of entries this year and greatly enhanced interest manifested by exhibitors. Many stalls had been added to the quarters assigned to horse, cattle, and hog stock, and yet there was not adequate room, and up to the latest moment at which entries were received and provided for, the sound of hammers and saws was heard day and night, in the effort to provide stalls, sheds, and pens for the stock. In the sheep department it was impossible to provide for the number exhibited, and they were herded in the open ground at different points. The quality of the stock exhibited was, in point of excellence, in keeping with the quantity. On all hands it was admitted that no finer exhibition of live stock was ever seen in the West, or anywhere in the country.

WISCONSIN STATE FAIR.

The Wisconsin State Fair, held at Milwaukee Sept. 26-30, was a very successful exhibition, and all things considered, the best ever held in the State. The weather was very favorable throughout, and the attendance from day to day was good. There were more entries than were ever before made at previous exhibitions of the Society, footing up in the aggregate 2,100. The receipts were upward of \$23,000, an excess of several thousand over the highest amount taken at any previous Wisconsin State Fair.

In every department the display was excellent, and the wisdom of selecting the principal city of the State as the place of holding the Fair, as well as opening the doors to competition from all points, was apparent.

The *Prize Farmer* is responsible for the following account, which opens with a very common, but as it always appears to us, most irreverent allusion to some fictitious power facetiously styled the "Clerk of the Weather." By no delegated authority, but direct from his own hand does God send on earth, rain, fruitful seasons, and as the Shepherd of Salisbury Plain beautifully puts it; "just such weather as pleases him."

THE ST. LOUIS FAIR.

The St. Louis Agricultural and Mechanical Association seems to have a permanent arrangement with the "Clerk of the Weather," by which good weather is to be furnished during the week of the St. Louis Fair. At any rate it is the good fortune of the Association to be blessed with sunshine on such occasions, and sunshine is a great element to

success. But beyond this, this association controls other and equally important elements. It always furnishes the people something to see that is worth while, and it does this by offering large inducements to exhibitors. There is no mistake about it, a large premium list draws from a distance and from the best.

The fair at St. Louis is the great fair of the country; it has been so for several years, and it was so this year. In attendance it far surpasses that of any other society or association. Here are the gate receipts on the different days last year and this year, as reported in the Missouri Republican:

Monday	\$ 1,837.00	\$4,000.00
Tuesday	4,652.00	6,750.00
Wednesday	11,106.00	13,500.00
Thursday	21,150.00	25,700.00
Friday	9,545.00	9,718.00
Saturday	3,044.00	4,000.00
Total	\$51,299.00	\$62,668.00
1870		62,668.00
1869		51,299.00
Excess		\$11,369.00

EDITORIAL GLEANINGS.

The name of this journal figures along with several others in the last issue of the *Canadian Poultry Chronicle*, under the suggestive head of "Exchanges never received." We are sorry to be found on the disgrace bench, even in good company, and can only say that our short-coming has been unintentional, and that we are only too happy to exchange with our contemporary, with which we hope to be always on good terms, notwithstanding a peck or two on our first association in the poultry-yard, a very common and proper occurrence, especially among game birds.

The West Northumberland County Society held their show at Cobourg on Tuesday and Wednesday, the 18th and 19th Oct. The weather was favorable, though the severe storm of the night of the 17th doubtless prevented some from being present. The indoor departments of the show were held as usual in the Victoria Hall, while the cattle and implements were shown in a field adjoining the Drill Shed. The total number of entries exceeded 1,000.

The Haldimand Township Agricultural Society held their annual exhibition at Grafton on Wednesday, the 12th October. The show was on the whole good, though not quite equal to some former ones. The close of the show was diversified by the presentation by the members of the society of a beautiful silver inkstand and gold pen to their worthy secretary and treasurer, Josias Gillard, Esq., who for the last twenty-one years has discharged the rather onerous duties of these offices to the satisfaction of the society. A well deserved present, alike honorable to them and him.

The annual fall exhibition of the Township of Hamilton Agricultural Society was held at Coloung on Tuesday, the 11th Oct. The morning was very wet, which doubtless prevented many from being present. The show was on the whole good.

The Annual Fall Show of the Township of Etobicoke Agricultural Society was held at the pleasant village of Islington, on Dundas Street, and, as far as the number of articles shown were concerned, was far in advance of the exhibition last year at St. Andrews; the entries for the present exhibition numbering 600, against 400 for that of last year. The attendance of visitors was rather smaller than had been expected, owing no doubt to the unpropitious state of the weather.

The fall show of the Albion Agricultural Society held in the village of Bolton, on the 13th of October, was the most successful exhibition yet held under their auspices. Both in the number of entries and in the quality of the stock, as well as in the general excellence of other departments, there was a marked improvement over former exhibitions.

The Halton County Fair held at Milton, Oct. 10th and 11th, proved very successful so far as entries of stock and attendance went. Fully five thousand of the yeomanry of the county, with their wives and families, were on the grounds on the 11th, the opening day of the fair.

The South Monaghan Society held their show at Bloomfield on Friday, the 14th Oct. The day was fine, and there was a large turn out of farmers with their wives and families.

As only one item in the cost of a war, it is calculated that the farming classes in France have already lost £170,000,000.

The New York poultry show is announced for December 14th to 22nd. The prize list will be sent to any applicant, by addressing the N. Y. Poultry Society, P. O. box 316, N. Y. City. Entries close on December 3rd.

The last monthly report of the United States Department of Agriculture states that the corn has been injured in some localities, but not enough to threaten a material reduction of the anticipated aggregate. There are complaints in regard to the cotton crop, but the general prospect is not discouraging.

The California State Board of Agriculture have awarded State premiums to Mrs. E. M. Weston, Sacramento, for 626,000 silk cocoons; A Packard, of Santa Barbara, for 150,000 cocoons and to several parties for mulberry plantations.

The owner of a thrashing machine, who has done a good deal of thrashing for several years past, informs the *Guelph Advertiser* that the wheat this year yields on the average about fifteen bushels to the acre, the sample though better on the whole than last year, is not first-class, such as produced in former years.

The wheat crop in North Wellington, especially in Arthur, Luther, Proton, Minto and Egremont, is reported by the *Galt Reporter* to be poor this year.

The sample is better than last year, but the yield is small. Barley is a good crop, and very fair sample. Oats a very fair yield, but poor grain. Peas fair.

The farmers in these townships will market a large amount of pork this year, the supply of killing hogs being large.

The French Agricultural Societies have put off all their meetings, as the whole force is required for its defence. The Paris Society of Carpenters has decided that the sum of 1000fr., destined for its annual *etc.* shall be applied in aid of the families of agricultural labourers of the neighbourhood serving in the army. It is the same all over the country.

AGRICULTURAL JOURNALS.

An intelligent correspondent of the *Journal of the Farm*, discourses in this wise upon the value of agricultural journals in the last issue of that paper:

There was a time when opposition to what is generally termed "Book Farming" was almost universal. The idea of a farmer gleanng any information that would be likely to prove of the least practical value to him from an agricultural journal, was regarded as so absurd, that it is not surprising that so many enterprises in the line of publishing papers of this class failed. But, happily this erroneous impression has given way to a wiser and more correct one, and to-day, perhaps no industrial interest is more largely or better represented by newspapers and magazines than that of a farmer.

Retrospecting the past, it seems remarkable that there should ever have been entertained for publications of this class, any other than the most favorable feeling. The amount of good that has always been done by them—the vast revolutions in agriculture that have been introduced through their salutary agency, and the immense increase of their circulation in every section of the country, and amongst all classes of farmers, entitle them to such generous support at the hands of the cultivators of the soil, as would place one and all of them beyond the contingency of failure.

Were it possible for farmers to communicate to each other, verbally, the results of their farming operations—their experiments, failures and successes—agricultural journals might be dispensed with, but as this is simply beyond the reach of human possibility, there is no remedy but the farmers' newspaper. One farmer may communicate to his immediate neighbor, or to any with whom he may come in contact, some important agricultural fact. But under the most favorable circumstances the process of making the information generally known, would be tedious, if not impossible. But if this fact is put on paper, sent to the printer, set up in type, and distributed far and wide over the country, it becomes the property of all. Other journals in turn give it a place in their columns, and thus in a month's time, nearly every farmer in the country is in possession of it, and in the enjoyment of the privilege of using it or not, as he may prefer. Without agricultural newspapers, the same result would not be reached in half a century, perhaps, if, indeed, it were ever reached.

Farmers should bear these things in mind, and

with cheerful accord, extend to every deserving journal devoted to the interests of their profession, a most generous support. I have already said that this, to a great extent, is being done, but there is room for still further enlargement. Two dollars a year spent for good agricultural and horticultural newspapers, may be safely set down at a hundred dollars clear profit to the subscriber, and in many cases, at ten times that amount, but of course this pre-supposes that they are carefully read. Farmers, support your newspapers, by your subscriptions, and communications.

A MOON FALLACY EXPOSED.

A writer in the *Ame in B ilder* has taken the trouble to refute at length a large number of popular fallacies regarding the influence of the moon upon terrestrial things. We extract the following upon the cutting of timber and the sowing of seeds:

"An opinion is entertained that timber should be felled only during the decline of the moon, for if it be cut down during the increase it will not be of good or durable quality. This impression prevails in various countries. But can there be imagined, in the whole range of natural science, a physical relation more extraordinary and unaccountable than this supposed correspondence between the movement of the sap and the phases of the moon. Certainly, theory affords not the slightest countenance to such a supposition. But let us inquire as to the fact whether it be really the case that the quality of the timber depends upon the state of the moon at the time it is felled. M. Dechampl, a celebrated French agriculturist, felled a great many trees of the same age, growing in the same soil, and exposed to the same aspect, and never found any difference in the quality of the timber when he compared those which were felled in the decline of the moon with those which were felled during its increase; in general, they have afforded timber of the same quality.

"It is a maxim among gardeners that cabbages and lettuce, which are desired to shoot forth early; flowers which are to be double, trees which are desired to produce early ripe fruit, should be severally sown, planted, and pruned during the increase of the moon; and that, also, trees which are expected to grow with vigor should be sown, planted, grafted, and pruned, during the increase of the moon. These opinions are altogether erroneous. The increase or decrease of the moon has no appreciable influence on vegetation, and the experiments of several eminent agriculturists have clearly proved this. Pliny states that if we would collect grain for the purpose of immediate sale we should do so at the full of the moon, because during the moon's increase the grain augments remarkably in magnitude; but if we would collect the grain to preserve, we should choose the new moon. So far as it is consistent with observations that more rain falls during the increase of the moon than during its decline, there may be some reason for this maxim; but Pliny can scarcely have credit for grounds so rational; besides which, the difference in the quantity of rain which falls during the two periods is so insignificant as to be totally incapable of producing the effects adverted to."

EDITOR'S BOOK TABLE.

FIRST LESSONS IN AGRICULTURE; for Canadian Farmers and their Families. By Egerton Ryerson Copp, Clark & Co., Toronto. (See advertisement) We have received from the publishers a specimen copy of this timely and valuable contribution to our Canadian literature, in the preparation of which Dr. Ryerson has rendered an important service to our agricultural, educational, and literary interests. The author says of the work, in a prefatory notice: "The selection of topics, arrangement, many of the definitions, explanations, and illustrations of this little book, are my own; but the materials and much of the phraseology have been compiled and condensed from the most approved modern works on Chemistry, Botany, and Agriculture." Originality were impossible in such a line of things; to collect and arrange the wisdom of the ages, is all that any man, however gifted, can do. Simplification, convenient arrangement, and compression, are about all that it is of any use to attempt in such an undertaking. Agricultural lore is contained in ponderous volumes, and scattered through various scientific works. To boil down, to eliminate, to make easy and plain, is the humble but useful office of an author or editor of "First Lessons." These functions have been, so far as we can judge, well performed in the publication before us. It consists of two parts; "Preparatory Knowledge," in which first principles are dealt with, and "Preparatory Knowledge Applied," in which these principles are reduced to practical results. The work is thrown into the form of question and answer, making it convenient for use as a class-book in schools, and we hope to find it extensively introduced into the common schools of our Dominion. In this form it is also well adapted for family use, and intelligent farmers could not do better than improve the long winter evenings by the study of this book, and the instruction of their children in its teachings. We tender our thanks to the Chief Superintendent of Education for the patriotic task he has so well fulfilled, and commend the "First Lessons" to all and sundry.

THE HANDY-BOOK OF HUSBANDRY: a guide for farmers, young and old. E. B. Treat & Co., Broadway, N. Y. P.p. 604 octavo. Price in cloth, \$3.50, in morocco \$4 00, in extra half-calf \$5.50, American money. We are indebted to the publishers for a copy of this work now completed; and, as we anticipated from the advance sheets noticed some time ago in our columns, it is a valuable acquisition to an agricultural library. We cheerfully publish and heartily endorse the following opinions of the Press respecting this book:—The *New York Daily Tribune* says: "ANOTHER OF WARING'S BOOKS FOR FARMERS.—The large class who have read Colonel

Waring's works on Agriculture and kindred topics, published at the office of the *Tribune*, will be glad to know that he has just completed a much larger and more comprehensive treatise called 'The Handy Book of Husbandry, and Guide for Farmers, young and old.' It contains about 650 pages, and is copiously illustrated. It is published (to be sold by subscription only) by Messrs. E. B. Treat & Co., No. 65 1 Broadway. From the advance sheets of this work we do not hesitate to predict for it a wide popularity. Written by a practical farmer and gardener, who has had much experience in writing, it is precisely such a book as every farmer should have and should read." The *New York Evening Post* says: "Messrs. E. B. Treat & Co., subscription book publishers, 65 1 Broadway, have issued the advance sheets of 'The Handy-Book of Husbandry, a Guide for Farmers, young and old,' by Geo. E. Waring, jr. of Ogden Farm. An idea of the character of the work may be gathered from the following extract from the introduction: 'My book is intended especially for those practical working farmers who are willing to believe that while they have learned much from their own experience, it is not impossible that other farmers (and men in other vocations as well) may have learned something too, something that it may benefit them to learn also; and who are liberal enough to see that all the truth and value of a fact are not destroyed by its being printed. As will be seen by reference to the table of contents, a wide range of subjects is discussed; in fact I have endeavored to write just such a book as a young man, learning another occupation and turning his thoughts to farming, would be glad to take for his guide; and to such I say that there is not an important statement in these pages that I do not know to be reliable, nor a theory advanced that my own experience has not taught me to approve.'" The *We telegraph*, Chicago, says: "That it will be a valuable addition to the agricultural literature of the day, is assured by the fact that it is from the pen of Geo. E. Waring, jr. already well known as the author of several valuable works upon agricultural subjects."

FRUIT GROWERS' ASSOCIATION.

The Fruit Growers' Association of Ontario held their annual meeting in the Agricultural Hall, Toronto, on Tuesday evening, October 4th, 1870.

The President, Rev. R. Burnett, occupied the chair. The Secretary read the proceedings of the last meeting, which were approved.

The Directors' Report was then submitted, which contained the discussions of the meetings held at Brantford, Hamilton, London, and St. Catharines; the prize essay of W. Saunders, Esq. London; the report of Mr. Saunders on the rewards offered for the capture of *contulio*; the report on the distribution of the Eumelan Grape; the returns received to the questions issued; an account of the fruit received from the Fruit Growers' Society of Nova Scotia; and the circular, embodying the objects and benefits of the Association.

The Treasurer's report was then read, showing—

Balance in Treasury since 24th Sept., '69.....	\$ 318 64
Members' fees since 24th Sept., '69.....	381 00
Government grants, August, 1870.....	350 00
Total.....	\$1,049 64
Disbursements since 20th Sept., '69.....	800 41
Balance.....	\$ 249 23

The President delivered the following address, which was listened to with deep attention:—

PRESIDENT'S ADDRESS.

When a traveller has left his home for a season, and has a definite object in view by his journeying to distant lands when he imagines that he is high in his accomplishment, he begins to think of counting the miles he has traversed, and the multitude of incidents that he has contributed to the successful issue of his plan. When one of our merchants has been long and sedulously engaged in the prosecution of an extensive business, he finds it to his advantage to balance accounts—to take a survey of the means employed to foster and extend his prosperous pursuits. So ought it be with those who, like the members of the Fruit Growers' Association of Ontario, are diligently endeavoring to impress upon their fellow men the importance of fruit culture. It is our duty, from time to time, and especially at our annual gathering, to catch up the threads of our sayings and doings, and bid them go and accomplish our objects in every county, township and homestead of our land.

Associations for commercial purposes seem to understand the importance of keeping past progress and attainment carefully before the public supporters of their respective institutions. An Insurance Society for instance, recommends its advantages by constant appraisals of its past successes, and in every annual statement contrasts the past with the present. Statistics furnish the grand criteria of such comparisons, and inspire the general public with confidence. To such an extent has this become the case, that rival institutions place their claim to favor on the amount of business which they have successfully accomplished. This is just as it should be. And if our Association is to take a forward place among the beneficial agencies of our Province, we must endeavor to lay claim to the appellation of benefactors, by presenting a careful exhibit of our good doings.

With us, at present, not having in the past employed systematic effort, it is more difficult than many would at first suppose, to give of vidimus of past progress. No general statement have ever yet been made of the rise and progress a fruit-growing among us. Here and there, indeed, enthusiasts have appeared, who have by their influence and example, disseminated fruits and a taste for their cultivation, the best sort cultivated, have ever yet appeared from the press or our country. It has occurred to your President that it may not be an altogether unsuitable subject of address on the present occasion, to take up the subject of "the progress of Canadian fruit culture in our Western Province, and the best means for giving it an increased impetus."

My distinguished predecessor in office, Mr. M. H. Mills, in one of his annual addresses, presented a summary historical account of our Society, and, in several other of his papers of a philosophical and practical bearing, has greatly exhausted the field of observation on our favourite and interesting cultivation.

There can be no little question that our fruit culture owes much to the taste and experience of the United Empire Loyalists. These men, who are fast by their works. This zeal not only brought with them from the States, their cherished political opinions, but also the arts and industries habits, which characterized them on the other side. With a hard struggle for existence for some years in their

new locations, they did not neglect the means of securing future comforts and profits.

The late Colonel Land, who settled in Hamilton in 1794, told me years ago, that when he went to Grimsby carrying his wheat on his back to get it ground, he greatly prized a few scions of grafted trees, obtained there from older settlers than himself. To prepare for grafting, he sowed the seeds of apples obtained from any quarter, and in due time planted them out as orchard trees, and top-grafted them as opportunity presented. Orchards of seedling fruit are not rare in several parts of the country even now. Not to mention orchards, a great proportion of whose fruit trees bear natural fruit even in the neighbourhood of Niagara, there are the remains of large orchards of natural fruit along the shore of Lake Erie, from Simcoe westward.

Francois Bab., Esq., brought up from Montreal, in 1799, the following varieties, which are pretty generally distributed in the south-west: Fammuse, pomme grise (two varieties), Red Colville Roseau; another called Long Roseau, the Bourrasa, and one called White Colville, a sample of which the Fruit Growers' Association had from Nova Scotia a year ago. It was, however, Mr. James Dougall says, "the winter Pearmain."

In the year 1835, Mr. Dougall, one of our most esteemed directors, and a veteran horticulturist, began to disseminate the finer varieties. Some years after the late Dr. Beadle, St. Catharines, and Mr. Leslie of Toronto, introduced new and valuable sorts.

The advance of our horticulture from small beginnings to its present eminence, is altogether within the memory of living men. The premier Horticultural Society of the United States, (I refer to that of Cincinnati) dates *o ly b r k* to 1843; and the gentleman, in whose house it was formed, Robert Buchanan, Esq., still lives to grace the Horticultural Society of that city, and to urge forward by his enthusiastic example all kinds of fruit culture.

Niagara and District have long been famous for their fruits. As the Old Capital—a military and trading post its position brought many casual visitors and residents of varied tastes. The late Hon. James Crooks was in the habit speaking in enthusiastic terms of the Count de Flahault, who introduced into Niagara both apples and pears from France. From his stock much of the best fruits in the Niagara and Hamilton Districts has arisen. Indeed some of the best apples we have were brought into notice by the Count. There is an apple of superior excellence, which ought to be mentioned in this connection, and which unfortunately is not so well distributed as its merits warrant, I mean the swazie pomme grise. It was first introduced into the Niagara District by Colonel Swazie and is one of the best, if not the very best apple known. Its eating, cooking, and keeping qualities, attest its excellence.

Mr. Crooks brought with him on his removal to Flamboro' all the best sorts of apples grown at Niagara. From Flamboro' as a centre, the finer and then rarer sorts were quickly disseminated. Mr. Crooks told me that people were in the habit of coming long distances to obtain cuttings, of which he was no niggardly distributor. In an mention of these early times, we ought not to omit the tribute that is due to horticulturists on the other side of the line for their enthusiastic and acute prosecution of the trade in fruit trees. Settlers from that country in almost every corner of

our land, brought the taste and desire for fruit trees with them, which had an early development in the Old Dominion and through out the New England States. This fact is yet apparent among the descendants of Americans now naturalised in West rn Canada. As a class they are still pre-eminent for their fruit-growing, and taste for horticulture.

The progress of fruit-growing, of late years among all classes, is wonderful. Western Canada, is now looked to as one of the great sources of supply for the Province of Quebec. It is an undoubted fact that we are beginning to compete with them, even in their own market, for apples. Large shippers forward great quantities of apples to Montreal and to the City of Quebec. This season I had an advantageous offer from a fruiterer in Montreal, for any variety of pears that would take the market, while the Bartlett was especially mentioned. Horticulturists from the States declare that the apples grown by our farmers in the Niagara District will successfully compete with any grown in any part of New York State. This is as flattering as it is remarkable, if we take into account the advanced state of fruit culture in Rochester, Lockport, Canandaigua and the other fruit centres in that State.

It cannot be denied that the art has received a great impetus by the means employed for that purpose by the Fruit-Growers' Association of Ontario. Their records show the painstaking efforts made in this direction. The list of apples and fruits best adapted to the different districts of our longitudinal country is valuable, and might be made the means of greater good. The soil and climate influences are so varied that it is only by frequent comparisons that we can arrive at the knowledge of which fruit trees are best adapted to any particular locality. For example, varieties of fruit trees that do admirably well in Hamilton, Grimsby and Niagara, often produce poor and stunted fruit at no greater distance than Toronto and further east. Our Greenings are greatly superior to those grown on the north shore of Lake Ontario. The Baldwins and Spys of Wellington Square and Stoney Creek can scarcely be equalled an where.

This principle of adaptiveness to a particular locality must yet form an important phase in future operations of this Association.

Pear culture, perhaps, has even made greater strides than that of apples, because it is more recent. It is true, indeed, that there is no want of individuals, who have been for years touched with the fever of heart-culture. Mr. Dougall, of Windsor, years and years ago, went to the expense of importing new and rare varieties from France. Here and there his efforts and example have borne fruit. There is some fine fruit grown on the northern shores of Lake Erie, which, in many instances, can be traced to his nursery. St. Catharines and Niagara have been, perhaps, far ahead of other parts of the country, in the cultivation of the older and finer varieties of pear. Pears excel on alluvial deposits, both in the Old and New Worlds. Windsor and Niagara are striking examples of the remark. The old pear trees in and about Windsor are the wonder of visitors, and there are some specimens of pear trees at and near Niagara not much behind the former in growth and size.

The cultivation of the peach of late years has not kept pace with apple and pear culture. Owing to the open and unsteady nature of the weather in

winter, and the ravages of the curculio, peach trees have suffered severely. Eighteen years ago—which is the extent of my experience in the country—there were few finer sights to be presented anywhere, than a journey from Hamilton to the Falls, by the macadamized road, in the month of May. In that month the blossom was exquisite. Now all is changed; whole orchards have disappeared, and few cultivators of that luscious fruit can be found. It is all but impossible to raise a peach tree or a peach.

We are satisfied that on the western borders of Lake Ontario, the northern of Lake Erie, the ridges of "Long Point," parts of Essex and Kent, and the shore of Lake Huron—as Bayfield, Goderich and Kincardine, will not raise peach culture to any enviable eminence in our Province. Nectarines flourish well in gardens as standards, at Goderich and along Lake Huron from Sarnia to Kincardine. The inroads of that little Turk, the Curculio, is blamed for the almost total neglect of apricot, nectarine and peach culture; but as "Eternal vigilance is the price of good fruit," perhaps the blame ought to be laid at the door of our neglect. Many fruit-growers have overcome the unwelcome "Turk," and, once got rid of, a good crop is ensured.

Should any one hear me who may desire to enter upon apricot and nectarine cultivation, I strongly recommend, from my experience, that the trees be planted in a western exposure, of a house or other building, as the day is far gone before the sun gets round to shine on that aspect, when a frost night has rendered the branches and their sap-vessels liable to injury by the sun shining on and bursting them.

Plums have come into very general cultivation of late years. They have always been considered a most desirable fruit, and are highly esteemed by the public. It is not many years since no variety was to be found in our markets, except the common blue plum. Now the finest sorts are generally cultivated and bring large prices, five dollars a bushel is no uncommon price for them in the Hamilton market, and all that can be produced find a ready sale at \$3 00. Public taste is being educated for finer varieties. It is a remark often heard among purchasers who have patronized the best varieties, once my taste is spoiled for anything else than the best. Duane purple, Bradshaw, McLaughlin, Guthrie's apricot, and Ro'ne Dinde de Bayay, are leading varieties and all these are productive bearers. Plum culture will amply repay all outlay.

We have never had any great liking for the cultivation of the cherry. There are so many slips between the tree and the lip, that often much labor is lost. What with uncertain crops, bird depredation and other enemies such as the cherry curculio, very often the smallest share remains to reward the grower. The advance in the cultivation of the cherry is quite on a par with that of the other fruits before mentioned:

Perhaps the advance on the whole is greater.—Most of us remember the rows of never-failing Kentish that used to grace the farmer's snake fence or garden border. These have been in great measure replaced along our frontier townships by the Black Tartarian, Black Eagle, Elton and Napoleon Bigarreau. The improved modes of canning the smaller fruits has given quite an impetus to the production of the various sorts of cherries. The tree itself has fewer enemies than most other fruit

trees. It is, however, liable to gum on heavy clay soils.

The peach and quince, and grape, do well wherever you find the chesnut flourish. They delight in a white sandy, clay loam, and wherever the circumstances are favorable, large crops reward the producer. It has often occurred to us, that the absence of the medlar is to be deplored. We have made frequent attempts to secure a specimen tree, but have hitherto failed. We don't despair however.

Small fruits follow in the wake of any advance in horticulture in any country. In newer and more backward districts, the cultivation of the smaller fruits is almost unknown. The want is supplied by the abundant crops of wild native raspberry and strawberry. Hamilton and Niagara and Erie districts are a most too far south to admit of the profitable cultivation of gooseberries. Currants do well and very prolifically.

Grapes are rapidly becoming a speciality in cultivation. Marvellous advancement has been made with respect to grape culture. It seems as if we had become inoculated with the mania from the other side. Visions of fortune-making and good wine-making have been for years so industriously circulated of the Catawaba, and of grape growing in California, that we too have been seized with the desire for improvement. Vineyards are springing up in many sections of the Province. Enterprising farmers have begun to think that it is as profitable to produce grapes as wheat, and that a few acres are more profitable under grape culture than the same amount under cereals. Mr. William Lottridge, of Stony Creek, has this year sold his grapes at 6 cents a pound. This will pay grapes grown in Canada has not undergone the fluctuations usually characteristic of any new introduction of a similar kind of production. Advantage has been so taken of the trials and experiments of others in the United States, that in a rare like it has almost sprung into maturity from the first. Fine varieties are only planted now, the best perhaps, in point of excellence, hardiness, productiveness, for table and wine-making are the following, named in order of their quality, I am indebted to my friend, Mr. Wm Haskins, of the City Water Works, for the following information, which may be relied on, regarding the best hardy varieties of grapes:—

The Delaware, which always ripens here; the Hartford Prolific, the first grape for the million; the Concord, which always ripens and is prolific. These three have been tried and found to succeed beyond a doubt. Rodgers' Hybrid follow in order. The Salem and No 4 exhibited all the excellence of Rodgers' hybrids. Classed with these is No. 15.

Dr. Grant's Iona and Isabella are really superior to any others where they will succeed and mature. The Isabella (black) ripens anywhere, comes in soon after the Hartford Prolific and the Iona, when it will ripen and has no superior in the country. These are all excellent table grapes.

The Clinton stands A 1 for the making of red wine. The Americans who once discarded the Clinton now speak of it with great favor, and say that its excellence has been overlooked. The Delaware and Dina stand next for white wine, and Ives' seedling will always ripen well to make a good claret. The Creveling makes a superior wine, and the Adirondack progresses in public favor.

In entering on the question, "How are we, as

fruit-growers, and especially members of the Fruit-Growers' Association of Ontario, to advance fruit culture? I crave your patient indulgence and generous criticism. The views are entirely my own, and to be received and acted on with caution, on account of my limited experience in fruit-growing.

The first, and one of the most important influences for the advancement of our interests and those of the country, is the proper outlay of the means placed at our disposal by the Act of our Provincial Legislature. If private means and enterprise have so much benefitted horticulture, how much more the intelligent disposal of public money. Any of our members, some years ago, were taken with the idea of an experimental farm. This useful old and stereotyped notion has been productive of much good in our day, in older and more advanced countries than ours. But what we desiderate, is the formation of the whole Province into an experimental farm, for the propagation and testing of old and new fruits. Our Province is so varied in its climate and height that what suits one quarter seems to be the very reverse in another. Even at short distances the most singular contrasts appear. An apple does well at Windsor, but it fails at Toronto or Kingston. We require, therefore, to know not only the best fruit, but also the locality where it will succeed the best. We are aware that soil has much to do in this case, but we will reserve this question for a distinct paragraph. The plan adopted last year is a good one, and has borne the test, and nothing could have been more successful, I mean, the issuing of a plant or fruit that is of superior excellence, asking for its cultivation, and annual report of its success. The dissemination of the Humlan grape has largely benefited the Society in the way of additions to the membership—not far short of 300 new subscribers were obtained in the city of Hamilton alone, and large accessions throughout the country in general.

It is not to be expected, indeed, none of the promoters of this movement for a moment suppose that the fruit trees distributed will prove wholly suitable—that is not to be expected but it is no little gain to intending purchasers for the Society to be able to say such and such a variety has been tried in your neighborhood, and under similar circumstances it will not succeed.

We are satisfied that attention has not been sufficiently directed to the geological strata of our country, and to the question of the influence of the different strata on fruit growing. Some years ago I was incidentally led in this direction, by the observation of the fact that the finer varieties of fruits flourish well in a friend's garden at Goderich. I tried to account for it, and passed in review before my mind the moderating influence of Lake Huron, and the height above the sea, but to the discomfiture of all my notions, I further found that the same fruits were only produced in certain localities, and not throughout the length of the district—Kincardine, Goderich, and Bayfield. In looking at Sir William Logan's geological map, I saw that a certain formation cropped at those places, and from the fact that the varieties of fruit did not appear to do well at certain intermediate localities, where they had been tried and where a difference prevailed, I was forced to the conclusion that the geological formation of a country has much to do with good fruit raising, and that the question of soil, now as of old, is of paramount importance to us as encour-

agers and directors of fruit growing. So impressed was I with this idea, when Mr. Beadle and I prepared your last fruit report, that I then proposed a new distribution as a basis of comparison, viz:—a geological one instead of one into districts. It has not happened that you get a report from two members living a stone throw from each other in the same district, in the same valley, on the same plateau, with similar exposures. Such reports are contradictory and unsatisfactory. Mention may be made of the same fruit trees, doing badly in one case and well in another. Such reports are not only puzzling to compilers of statistics but worthless as data on which to build up any practical plan and direction for local fruit growing. We would suggest that our Society should bring out the views of members on this point, give a premium for the best essay on the different geological strata best adapted to fruit culture. It would ventilate this important subject, and nothing loses but mustiness by ventilation.

Let me also notice the question of the utilization of fruit when it has been raised. I do not refer to its consumption by the immediate producers and their immediate neighbors, but as to the mode of dealing with it, that others at a distance may also be induced to enquire for it. Exhibitions are most commendable, and I could not, I would not lift up any derogatory word against their usefulness. Our presence here, on this occasion, would be a living rebuke to any such rash sentence. It seems to me, however, that we have got beyond the day of exhibitions, pure and simple, these being accomplished facts. What we want now is the utilization of our exhibited fruits.

The Hon. George Brown, at a recent meeting of the Local Committee, suggested that subjects of discussion, arising out of the articles exhibited at our Provincial Fairs, should be fair, and temperately canvassed on the different evenings of the Exhibition week. The benefit likely to accrue from this, if undertaken, is so apparent, that it requires only to be put to commend itself to every exhibitor. Publicity is the grand desideratum of our exhibitions. Competition involves publicity. The fact of our having goods or products better than our neighbor, and more deserving of public confidence, requires to be known. What I would urge would be that not only should our Association order its Directors to prepare questions for discussion, connected with our speciality, but that they should be so widely disseminated through the press, that intelligent and practical farmers, interested in the Horticultural branch of their profession, should come up to the place of exhibition and to the meetings for discussion, prepared to take an active and prominent part for the general good.

The question of utilization does not end here, though it may well begin with the former suggestion. We would like to see the samples of our exhibited fruits at our Provincial shows, more widely distributed, to catch the eyes of as many beholders as possible. Let the Provincial Association pass a rule, that all prize farm and garden products are to be considered as the property of the Association, and a difficulty is obviated in these not being the property of the Association. Something similar is done by the owners of stock and machines. Why not with fruits? The same bull that took the prize to-day may be exhibited next week in a distant county, and

carry off golden opinions and something else from a different body of exhibitors. So with machines, let it also be with fruits. Let means be established whereby others can derive benefit from our fruit growing. Believing, as I do, that our more immediate district of Toronto and Hamilton, Niagara and Erie, are yet destined to become the great fruit growing districts of our country, it becomes us not to let our light be hid under a bushel. I would also send samples of our fruit to Newfoundland, and thus show them what we can do so far west, but I would also send to the township and agricultural fairs in remoter districts where fruit is scarce, and where there is, or rather ought to be, a demand for it, the products that could be put in their way, if only they desire them, as a healthy addition to their food and comfort.

The exportation of fruit ought also to be encouraged, similar means as the foregoing ought to be used to accomplish so important an object. Our Association should attempt to open up means of communication with the Royal Society of England, the Royal Highland Agricultural Society, of Scotland, and with the Dublin Horticultural Society, and enter as competitors as fruit growers, in their exhibitions; such inter-communication would do more to develop provincial export than even the Reports of our Provincial Exhibitions would do for years. It may be remembered, for I do, that some years ago, specimens of our Canadian-grown apples were forwarded to the Royal Society, which created quite a surprise among the members. These means must be reiterated and like efforts made at short intervals—we must make more of our advantages than we have yet done. Good will abound, not only to the country generally, but to the farming class particularly.

In close connection with this subject is the question of the best varieties. This has been somewhat authoritatively settled by some of our savans, in the pages of our publications. With due deference to the extensive knowledge of the practical horticulturists among us, I would suggest the propriety of a double division of "Fruits desirable to be cultivated." First and foremost, market varieties claim our first attention, but the conditions of fruit-growing are far from being served by furthering the production of market varieties; we want another class of fruits to suit a large, and, I am happy to say, an influential class in our Association—I refer to the amateur class. Men who cultivate for pleasure and beauty, as well as for profit, such apples as the Pomme Royal, Summer Rose, Mother, Autumn, Strawberry, Tetofsky, and many of a similar class and they are many, ought not to be discarded from even general cultivation, although for profit, they cannot be compared to the old market varieties. Greater and greater attention is being given by an increasing number of amateurs to these superb varieties. The Pomme Royal—an apple not enjoying that eminent position its merits ought to command—is one of the best summer apples. The same may be said of the Swallow Pomme Gris as a winter apple. In exhibitions for prizes this distinction ought to be kept steadily in view. At a late competition for excellence in fruits, we saw a plate of Mother apples entirely overlooked, and a poor but common variety carrying off the palm in its stead.

This leads us to notice a distinctive feature of

the price catalogue of the present Provincial Exhibition, and that is the classifying the different kinds of pears and apples, and only bringing varieties of the same kind into comparison. We write in anticipation of the event, but we venture to augur that the display will exceed the most sanguine expectations of its promoters. The change, we believe, will work well, and simplify the labor of the judges. It is scarcely fair to ask a man to decide between a plate of seckels and a plate of bartletts. By the new mode the difficulty is obviated, and the decision is not left to individual taste. We would like to see our Association introduce to general practice some discrimination between market varieties of apples, pears and plums, and those of higher flavor probably, but not so common on account of not carrying so well, or from some other such cause. Such discrimination in our prize exhibitions would go far to introduce a very general cultivation of apples and pears, which at present, for several reasons, are in abeyance. We might surely blend the profitable, the beautiful, and the pleasant, the interests of the nurserymen the adornment of the orchard and table both of the farmer and professional man.

Another point of attention in fruit culture, that is to advance its best interests, is the inculcation of the more general practice of thinning the fruit. Being myself one of the breed, sort I am perhaps the last man who ought to lecture other growers on their failure in securing good fruit. I am so impressed, however, from various reasons, of the urgent propriety of thinning out, that I cannot but make brief mention of it.

The president then referred to the preservation of fruit growing, good advice to fruit growers, and exposing the fallacies of some of the systems in vogue. He also referred particularly to the cultivation of the grape, showing how the expenses of the vineyard might be curtailed, and brought his able address to a close, after thanking the Association for its bearing toward him during his year of office.

NOTE OF THANKS.

Mr. Saunders, London, seconded by M. Ross, Goderich, moved a vote of thanks to the President, and that the address be published *in extenso* in the report of their proceedings, which, on being seconded, was put and carried.

ELECTION OF OFFICERS.

The election of officers was then proceeded with, with the following result:

President—Rev. L. Burnet of Hamilton.

Vice President—Mr. J. C. Rykert, St. Catharines.

Secretary—Treasurer—Mr. D. W. Beadle, St. Catharines.

Directors—Messrs. James Dougall, Windsor; W. Holton, Hamilton; W. H. Mills, Hamilton; W. Boulton, Toronto; A. B. Bennett, Brantford; Geo. Leslie, Jr., Toronto; W. Saunders, London; A. M. Ross, Goderich; Charles Arnold, Paris.

Auditors—W. L. Copeland and W. J. McCulla, St. Catharines.

After some discussion on horticultural subjects the meeting adjourned.

AN EXCELLENT OPPORTUNITY FOR A
FORTUNE.

The editor of the *Western Farmer*, one of the best of our agricultural weeklies, makes the following suggestion regarding improvements in agricultural machines:

"There is a large field open for inventors in the line of efficient labor-saving agricultural implements of several kinds, and especially as it regards subsoil plows. There are several kinds of instruments now constructed for the purpose of pulverizing the substratum beneath the surface soil, but they are all very far from possessing the efficiency which is of pre-eminent importance in an implement of this character. The implements in use, at the present day, which are employed to loosen and pulverize the subsoil, often render a portion of it more compact than it was before the plow was driven through the stubborn ground. When the substratum is composed largely of argillaceous and unctuous clay, if a subsoil plow be employed to pulverize a portion of it, say a few inches in depth, the share and flange will pass through the clay, almost like a "mole ditcher," compressing the compact clay into a still smaller compass than the particles ever were before. If the flange of the plow be elevated so as to lift the furrow slice higher than usual, much of it will drop back in its original bed, without having been pulverized to an extent that would be of any practical value to the growing crops.

"The great desideratum in a sub-soil plow, is an implement so constructed that it will reduce the compact substratum beneath the surface mold, to such a fine state of comminution, that water will settle down through it as fast as the rain descends. One great object in subsoiling is to render the lower portion of the seed bed so fine and mellow that roots of growing plants will meet with but little resistance in their passage through the compact particles. When the impervious substratum is broken up and rendered firm the process obviates the necessity for underdraining. Hence, the construction of the implement must be of such a form that it will break up and pulverize the furrow slice thoroughly, and leave the fine particles in the bottom of the furrow that was made by the common plow. When the surface soil and the subsoil are both of such a character that it is desirable to turn the subsoil to the surface above the fertile mold that constitutes the soil, a subsoil plow is not required. On the contrary, when the character of the surface soil is such that it is of eminent importance to keep the mold on the surface, a subsoil plow is indispensably requisite.

"Inventors can readily perceive by these suggestions what are the operations to be performed in subsoiling. Hence, the person who will bring out an efficient implement for this purpose, can scarcely fail to secure a fortune, provided he will manage judiciously with his invention.

The Farmer.

GLIMPSE AT CANADA FARMING.

Our Editorial *conférence* of the *Practical Farmer* has lately wandered so far from home "away down East" as to visit Montreal, and while there took the opportunity, to take a passing look at some of the farms in the vicinity of that city. Under the above heading he narrates what he saw as follows:

During a recent visit to Montreal we accepted the invitation of Mr. Edward Barnard, editor of *La Semaine Agricole*, to visit some of the farms in the vicinity of the city. Our route took us along the St. Lawrence river, past the celebrated Lachine Rapids. The farms were old, many of them having been tilled for over two hundred years. They were laid out very long and narrow, the object being to give every man a frontage on the grand and beautiful St. Lawrence. The old French rule established that the farms should be in the proportion of thirty-six rods long to every two rods in width. This plan makes the farms of a shape inconvenient for tillage, but it is not without its advantages. It secures most excellent roads, since the travel over them is great. It also brings farmers within neighborly distances to each other, and enables them to have most of the social advantages that with us are only found in towns. In short, here, as on some of the roads leading out of Quebec, the traveller rides through a continuous village, nearly all the inhabitants of which are farmers. They have to walk but a few steps to reach the church, or school, or to visit places of instruction or amusement; though their flocks and herds, fields and pastures, may be at quite a distance off.

The houses are all of the old French style, built of stone, having one or two rows of attic windows in the roof, being, with their surroundings, models of rural taste and architecture. In this respect they contrast strangely with the city style of houses that are so common on many of our farms. The effort seems to have been to give a village air to the country, and not the reverse of this, as among us. There is a manifest disposition even among people of other nationalities, to whom these estates have fallen, to keep up these old mansions in the same style they were when English arms seized this beautiful region from the French, who brought and planted here their civilization, their religion, and love of home institutions.

The French Canadians are, as a rule, poor farmers, though they are industrious, and are regarded as good citizens. The best managed farms are those in possession of the Scotch and English. One of the first things that strikes the eye of the stranger, who visits the farms in this vicinity, is the covering of the stacks of hay and grain. It consists of a sort of thatch formed of long grass, and secured in its place by ropes of twisted hay. These lines of thatching overlay each other like shingles on the roof of a building. This is said to form a complete protection to the bulk of the stack, so that it may remain in the field over one season without apparent injury. Another novelty we noticed was the manner of marketing hay. Instead of loading it on the cart in bulk, it is tied up in bundles averaging fifteen pounds each.

While riding, we noticed several fields, from which the grain had been cut. From the appearance of the stubble we inferred that the seed had been put in with a drill, though we had never seen work done with such uniformity in respect to the straightness of the rows. On inquiry we learned that the grain-drill was unknown in this part of the Dominion. What we took for the track of the drill was only the edge of the furrow of a plow. We were curious to learn how this plowing, so exact and uniform, was done, and for that purpose called at the farm attached to the place. The first thing we saw on entering, was quite a number of plow guides, to be stuck up in the field to aid the plowman in turning a straight furrow. These were long poles, turned in a lathe, and painted in various colors, red, white and black, so as to be easily seen at a distance. The plows used were of the Scotch pattern. These were about eleven feet in length, although the point of the plow extended nearly to the end of the beam. The plow proper was of iron, having a steel mould board which was of unusual length. Of course the handles were very long, stretching back so as to give the plowman complete control in regulating the depth and straightness of the furrow.

The first farm we visited, with a view of thorough inspection, is the property of S. Sheldon Stephens. It is situated two miles from the city, and contains eight acres. There is a most thorough system of drainage on this farm, and in order for the main drain to reach the outlet on the bank of the river, it has to be laid a part of its distance fourteen feet below the surface. This is kept as a breeding farm, and everything was very finely arranged for the purposes. All the cattle are kept up during the entire year, being accommodated in boxes measuring seven feet by nine. The cattle were all imported Jerseys. Among them were the bulls "Victor Hugo" and "Defiance," both from the royal farm at Windsor. Both of these bulls are exceedingly fine animals, though the former is so fierce that it cannot be taken to exhibitions. There were also ten Jersey cows, all imported from choice herds, four young bulls and ten heifers.

In the horse stable were four very beautiful Clydesdale horses, the average weight of each being 1,800 lbs. These horses are fed on mixed food, vetches and oats. Vetches or tares are largely cultivated here for soiling purposes. They are sown at the rate of one and a half bushels to one-half bushel of oats per acre. In a box near the horses was a litter of Clumber spaniels, from stock from the royal farm. These promising young dogs have all been bargained for at the rate of \$200 each. Outside the stable were several imported swine of the Prince Albert improved breed.

One of the most attractive features of this place was the poultry yard. Here we found between 500 and 600 dark Brahma fowls of all ages and sizes. It is undoubtedly the largest collection of pure blood fowls of this breed in this country, if not in the world. Among them are some of the prize birds of the late Birmingham show. Two persons, a man and woman, have care of this collection of fine birds. They report that they have no losses from disease this year. They attribute this success to the care and food the fowls receive. Their principal food is corn meal, with which is mixed bone meal, ground very fine and sifted. This bone meal

gives a strength to the eggs that enables them to bear transportation without breaking.

From this place, which may be considered a fancy farm, we rode two miles and visited Mr. Alexander Somerville, a practical Scotch farmer. His stock of cattle consisted of A. shires. These he breeds both for sale and for furnishing milk for the Montreal market. He raises little corn or wheat on his place, finding more profit in his hay, potatoes, oats, barley and roots. He stated that his usual rotation ran through six years. The first year was oats; the second potatoes, beets or turnips; the third, barley or other small grain; the three succeeding years the ground is mown or pastured. The best buckwheat we ever saw growing was on this farm. The proprietor considers that this crop essentially improves the soil for other crops, instead of injuring it. He puts great faith in beets as food for stock, believing they pay much better than turnips, whatever may be the case in England. His ordinary crop is twenty-five cart loads per acre. In seeding land to hay, he sows one peck of timothy and two pounds of clover to the acre. His average yield of hay is two and a half tons per acre. The land in this vicinity is well adapted to grass. A meadow lying in the distance was pointed out to us that was said to have mown fifty consecutive years without manuring and still produces two and a half tons of hay to the acre.

THE CHELTENHAM SEWAGE FARM—The Cheltenham (England) Commissioners have recently completed works, and purchased a farm for the disposal of town sewage by irrigation. The first yearly letting of the irrigated land was affected by auction recently. The land is all ordinary grass land, to which, as yet, the sewage is but imperfectly applied, and comprises 119 acres. It was divided into six lots, which let at prices varying from £5 18s. to £8 13s. per acre, and realized a total of nearly £900. The yearly cost to the town for interest and repayment of loan in thirty years is £1,100; so that, if the rent of the land should remain stationary, the town would only be put to a cost of £20 a year, and own the farm free at the end of thirty years, as against an expense of nearly £1,000 a year before incurred, with very unsatisfactory results for deodorising. But, in addition to the rent of the land, the Commissioners apply the sewage to adjacent farms, at a certain charge per acre, and have received for experiment several acres of their own land, which have been broken up for ryegrass, and are expected to realize a profit of at least £20 an acre; so that the farm will probably be conducted without loss, even during the first year.

FARM GLEANINGS

The *New Zealand Gazette*, published on Wednesday, July 13, states that the total number of acres under crop in 1870 was 900,504, as against 687,015 in 1869, thus showing an increase of 213,489.

The Alameda Beet-Sugar Company, in California, has from 300 to 400 acres in beets. The machinery for the factory cost \$120,000—the factory \$20,000. The superintendent is A. D. Bonesteel, lately of the factory at Fond du Lac, Wis.

Of Peruvian guano, the total export last year was

over 500,000 tons, of which Belgium took 82,000; England, 196,000; and North America, 25,000 tons.

In some parts of California, squirrels are a great nuisance, being so numerous as to destroy a great deal of grain. Bounties are offered for their scalps, and one man in Contra Costa county has slain 4,723 of these sprightly little animals. It is said that justice of the peace in that county have received 500,000 of the trophies during the present season.

M. Marix has taken, in France, a patent for the application of fluosilicic acid for the purifying of beetroot and other saccharine juices. The saccharine juices are first deluted with a sufficient quantity of water to take away the viscosity of these fluids; sufficient fluosilicic acid is then added to precipitate all the potassium salts present; and next, chalk is added to saturate any excess of the acid. The fluid is then filtered in order to obtain a clear liquid, and this is afterwards treated in the usual manner.

AN AGRICULTURAL RHYME.

NOT BY H. G.

Plough deep—two feet, at least—for corn or rye.
You can't in stony land? Sir, that's a lie;
A sub-soil plough will do it; then manure,
And put on plenty; if the land is poor,
Get muck and plaster; buy them by the heap,
No matter what they cost, you'll find them cheap.
I've tried them of en, and I think I know;
Then plough again two feet before you sow.

Potatoes get on best in sandy soil,
I'm sure of that—but plant before you boil;
Then put in strawberries; that's what I do—
Confound I you for a blockhead! Why don't you
Get modern works and read them? No, you'd rather
Go creeping on just like your stupid father.
That patch is good for melons. Why the deuce
Don't you convert these swamps to better use?

Beets are a paying crop, and don't cost much
To raise; so's cabbage, pumpkins, squash, and such;
They'll always sell and bring you back your money—
No bees? The mischief! What d'ye do for honey?
Sir, let me tell you plainly you're an ass—
Just look at those ten acres gone to grass!
Put turnips in 'em. Timothy don't pay—
Can't cattle feed on anything but hay?

I don't consider hogs a first class crop;
Give me my own free choice, sir, and I'd swap
The best of 'em for strawberries or sheep—
But let me say again, you must plough deep;
The trouble with our farmers is, that they
Can't be induced to look beyond to day;
Let them get sub-soil ploughs and turn up sand,
And hang it, sir! let them manure their land.
—Punchinello.

The Live Stock.

SALE OF NUNWICK HALL SHORTHORNS.

We copy from the *Times* of September 26, the following account of the sale of the Nunwick Hall herd. "On Friday, Sept. 23, Mr. John Thornton,

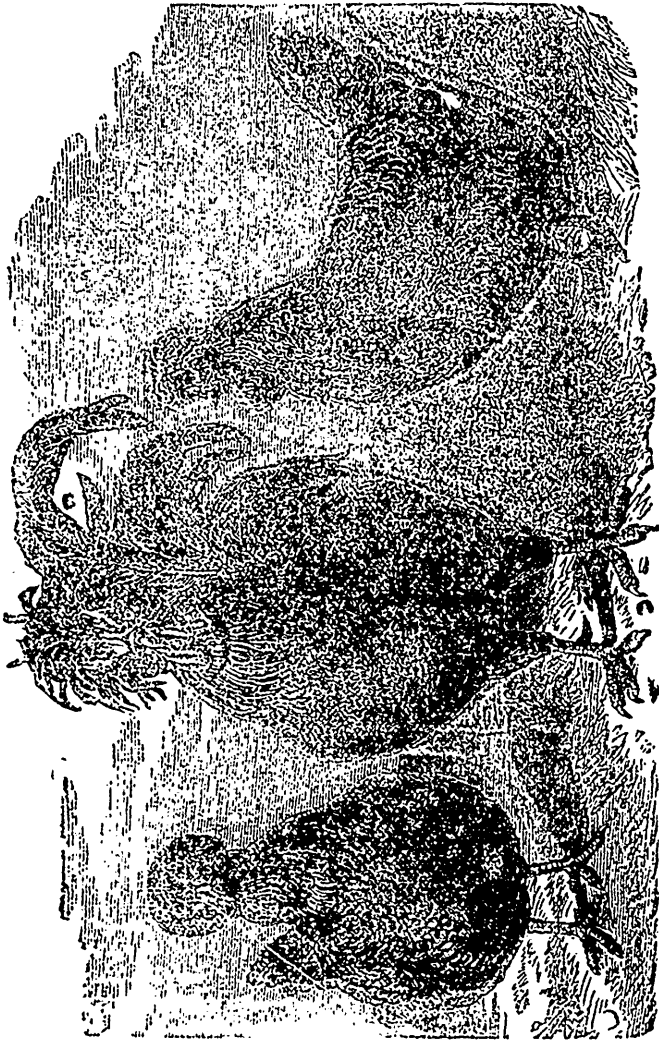
of London, brought to the hammer the herd of shorthorn bulls and cows belonging to Mr. C. R. Saunders, of Nunwick Hall, Cumberland. This herd has for a long time been well known as comprising some of the purest and most fashionable blood to be found, consequently the sale proved very attractive to shorthorn breeders. Among the buyers, at very high prices, were Lord Kenlis, Lord Skelmersdale, Lord Dunmore, Sir H. R. Vane, Sir W. Lawson, Mr. J. P. Foster, Killhow; Mr. T. H. Parker, Warwick Hall; Captain Olliver, Northamptonshire, &c. Mr. Cochrane bought for exportation to Canada, Mr. Hay for New Zealand, and Mr. White for Australia. Very high prices were given for the best and purest stock, the Waterloo and Wild Eyes strains being apparently looked on with most favor. The first Waterloo, however, was an old cow 12 years of age, and only brought 34 guineas. Clara Gwynne, with Favorite blood in her veins, only brought 84 gs, which was given by Mr. Thom, of Kirkleythore. Waterloo Duchess sold for 55 gs, but this cow also is six years old. Wild Eyes Duchess, a five-year-old is of a Bates branch, and was put up at 100 gs. Lord Dunmore, Lord Skelmersdale, Lord Kenlis, and Mr. Cochrane had a sharp fight for this prize, which was eventually secured by Mr. Cochrane for 250 gs. Captain Gandy, of Eden Grove, and Lord Skelmersdale competed with Lord Dunmore, who bought Fleda's Farewell for 150 gs. Lord Skelmersdale bought Farewell's White Rose for 100 gs. The first really "sensational" sale, however, was the price of 475 gs. given by Lord Kenlis for Waterloo 36th. Captain Olliver and Mr. Cochrane bid sharply for it, and the failure of the former gentleman evidently acted as a stimulant, for 500 gs. was the price he paid for the next lot—aterloo 37th, Lord Skelmersdale and Captain Olliver being competitors with him. Waterloo 38th and 39th brought 300 gs and 150 gs respectively, and were bought, the former by Mr. Cochrane and the latter by Lord Skelmersdale. Waterloo 40th was bought for 360 gs by the Rev. Peter Graham, of Turnscroft, Lancashire. Wild Eyes Duchess was secured by Lord Dunmore for 120 gs. Some of the bulls brought heavy prices. Edgar, who has won Royal and Highland prizes, as well as many others, went to Maiden Hill, Mr. Thompson paying 110 gs for him. Edgar's son, Lord of Nunwick, went for 205 gs to Woodhorn Manor, Morpeth. Mr. Messenger trying to get it for Australia. A Waterloo bull was bought for 89 gs by Sir H. R. Vane. Altogether the sale was considered one of the best ever held in England. The total proceeds were—for 47 heifers, 4531 gs, and for 17 bulls 1028 gs, making a total sum realized of 5559 gs.—*Bell's Weekly Messenger*.

CRÈVECŒURS.

Three breeds of fowls have within a few years found their way from France into the yards of poultry fanciers, named respectively; La Flèche, Crèveçœurs, and Hondans. Of these the Crèveçœurs are best known abroad, and most highly esteemed in France for the quantity and quality of their flesh. The full-grown cock weighs from 7 to 8

pounds, and sometimes even reaching 10 pounds. Beside their table merits, they are noted for early maturity, quick fattening, contentment in close and limited quarters, and the extra size of their eggs. They are only moderate layers, however, and until acclimatized are said to be delicate of constitution, and difficult to rear. They are striking, if not elegant looking birds—with their black plumage, large

crests, full wattles, and two-horned combs. These last are supposed by some to give this breed of fowls a decidedly "diabolical" appearance from their similarity to the being who is usually represented in pictures as characterized by "horns and hoofs." Our illustration gives a very good idea of the general appearance of the Crevecœurs. They are full and compact in form, with exceeding short



legs, especially in the hens, which bear some resemblance to a low-built, short-legged variety of fowls to be met with here and there under the name of "Creepers." They are of quiet, contented habit; bear confinement remarkably well, and sit out rarely. Some very good specimens of these birds have already made their appearance at Poultry Exhibitions in this country, and although per-

haps they can hardly be recommended for general adoption, they are fine fowls for table or market purposes, well worthy the attention of amateur breeders, and under favorable circumstances, would no doubt repay the breeder whose object in raising them was profit. We hope to see them better known and more widely diffused among Canadian poultry keepers.

GALT SHEEP FAIR.

The Galt Sheep Fair was held Oct. 14, in the grounds belonging to the Queen's Hotel, and a large crowd of people were present. About 300 sheep, of which 200 were rams and ram lambs, were brought in to the fair, but owing mainly to the lateness of the season, and it being a first attempt at inaugurating annual sales of this description, and consequently not yet known much outside of the neighborhood, the competition for animals was mainly confined to the local buyers, there being only two or three from the United States present. The animals brought in were chiefly of the Leicester breed, with a few Southdowns, and taking them in all, we have never seen a finer lot of sheep brought together in Canada. The auctioneer commenced at 1 p. m. with a lot of Leicester lambs from the flock of Peter Marshall, South Dumfries. These went off briskly at from \$10 to \$30 each. Some ewes sold at \$12 to \$20 per pair. Several lots from other breeders went for low prices, till those of Alex. McPhail, North Dumfries came in. They brought fair prices—averaging about \$12 each for ram lambs, and \$14 to \$20 per pair for ewes. Next came a splendid lot of pure-bred and very fine Leicesters, from the flock of James Cowan, of Waterloo. A few of these were sold at prices ranging from \$10 to \$30 each. The best being withdrawn, and the time for the train to leave having arrived, we left at 3 p. m., without waiting for any further results of sales, although there were still a large number to be sold. It is intended to have this fair some weeks earlier in future, when a larger attendance of American buyers may be expected, as they prefer using rams at a much earlier date than our breeders are accustomed to.

LIVE STOCK GLEANINGS.

The *Canadian Poultry Chronicle* for November complains most bitterly of the bad management and mistaken judging in the poultry department at the recent Provincial Exhibition, and wishes it to be understood that the collection then and there shown must not be taken as representative specimens of the present poultry of this Province, since many of the best birds were kept at home by their owners from an unwillingness to risk them in the hands to the Agricultural Society, or subject them to the blundering awards of incompetent judges.

The Smithfield quarterly cattle fair, held on the 10th inst., was well attended and animated. Buyers snapped at all cattle any way approaching beef; prices ranged from five to six dollars per 100 pounds.

Stringent measures have been taken to guard against the introduction of rinderpest from the Continent into Great Britain. Among other preventive measures, all cattle from the Continent are to be slaughtered immediately on their arrival at any English port.

Messrs. Wolcott and Campbell have recently lost one of their most valuable short-horned cows, 12th Duchess of Geneva. She was three years old, and was valued at \$10,000. She leaves a three-months-old heifer calf.

All necessary arrangements and preparations for properly wintering bees, in any kind of hive, should be fully completed in the month of October.

As an evidence of the extent of the cattle trade around Elora, the *Times* states that during the past week there was shipped from the Elora station nineteen car loads of cattle; each car would contain on an average twenty-one head, or a total of say four hundred head. In addition to this, several droves were driven to Guelph.

We are informed that Mr. Cochrane's famous imported cow, Rosedale, has been sold to Col. King, of Minneapolis, Minnesota, for the sum of \$12,000, the highest price yet paid for any cow or bull.

Two men in Boston have invented a device by which a horse is unhitched at once from a vehicle of any sort. A touch of the foot upon a treadle near the dash board releases the animal with a certainty, and applies a break which stops the carriage within a rod.

We have again, says the *Vermontian*, to report an increase in the spread of the foot and mouth disease. The malady prevails in forty-five counties in England and Wales, and ten in Scotland. The largest number of infected places are reported from Cheshire, Cumberland, Dorsetshire, Lancashire, Somersetshire, Staffordshire, and Yorkshire; the total number of centres of infection being nearly 4000. In Ireland also the disease is spreading, more especially in those districts where opposition is offered to the enforcement of the provisions of the law.

A correspondent of the *American Agriculturist* gives the following mode for preventing gapes in chickens. He says he has treated his young chickens in this way for several years with complete success. When the chickens are in condition to take from the nest, he puts them with the hen in a coop with a board bottom, so as to keep the young ones from the cold and damp ground. They are fed with Indian meal, on which boiling water is poured from the tea-kettle, well stirred, and allowed to cool.—The whole secret is to keep chickens dry and warm when quite young, and give them cooked food.

SALE OF SHORTHORNS.—On Tuesday, Oct. 25th, an auction sale of shorthorn cattle took place on the farm of Mr. William Thomson, Markham township.

The list of animals sold was made up by drafts from Mr. Thomson's own herd, to which some from those of J. S. Thomson, Whitby, and Robert and William Miller, Pickering, were added. The stock was in fine condition and sold well. Eight bull calves were offered, of which five were sold, bringing \$520, or an average of \$104 each. Fourteen cows and heifers were offered, and all sold, the sum realized being \$2608, or an average of about \$185 each. The best prices realized were \$375 for "Lizie," a light roan, from Cambridge by Prince Alfred [553]; \$280 for a five-month old red heifer "Oxford Maid," by Highland Chief from Ma. flower; \$250 for "Loretta," by Ashdale [30] from Blossom, a handsome dark roan three-year old. Hon. George Brown was the largest purchaser.—*Globe*.

The Garden.

HORTICULTURAL PRODUCTS AT THE RECENT PROVINCIAL EXHIBITION.

The following account furnished to the *Glbe* by its horticultural editor, Mr. D. W. Beadle, and published in that journal and the *CANADA FARMER*, is so much better than anything we could prepare from our notes, and so abounds with useful hints and suggestive information, that we gladly transfer it to our columns, and bespeak for it a most attentive perusal.

FRUIT.

"The display in the general list is one of unusual beauty and excellence. The change made in the prize list, whereby those varieties most usually grown throughout the Province were brought in direct competition with each other, had the effect of calling out a most superb display, and made the contest for excellence unusually spirited.

The collections of thirty varieties of apples which were shown were of superior merit; and such was their excellence, that the judges, after awarding the three prizes, designated two others of the collection as worthy of high commendation. Also in the collections of ten varieties of apples, the same fine quality was manifest; and a fourth one of them was distinguished by a commendation from the judges.

In the collections of four varieties of dessert and four varieties of cooking apples, the competition was very high, and it was only after long and critical examination that the awards of first prize were made to Mr. Gage J. Miller, of Virgil, who displayed much judgment in selecting for the collections varieties of high quality as well as fine samples of fruit.

The samples of Snow apples placed upon the tables were indeed of surpassing excellence, and long and sharp was the scrutiny to which they were subjected by the judges. This variety usually succeeds best in the northern part of the apple region, and we see that both the prizes for this variety were taken by gentlemen residing in the cooler sections,—the first by Mr. Samuel Wood, of Islington, and the second by Mr. John Shuttleworth, of Weston.

The Fall Pippin is still a great favorite, as could be seen by the number of samples exhibited, although in some places it is becoming very difficult to grow it free from spots. It is an excellent apple, and Mr. F. Morrison, of Hamilton, may well be congratulated on being able to grow it in such high perfection as to carry off the first prize.

As an autumn apple of great beauty and excellence, valuable both as a dessert and cooking fruit, and selling in the market for the highest prices, the Gravenstein stands in the foremost rank. The display of this variety was not large, but the specimens shown were of great excellence, and came, so far as the prizes indicate, in best quality from the old Niagara District.

The Ribston Pippin is a very valuable variety, admirably adapted to our climate, growing here in the highest perfection, and commanding, when shipped to the markets of Great Britain, the very highest prices. We are sure the admirers of this

fruit at home would have paused in wondering delight over the truly splendid display made in this variety. Though the first prize was given to Mr. Gage J. Miller, of Virgil, who has the advantage of residing in what is termed the fruit garden of Canada, yet the second prize was won by Mr. G. Tattle, of Yorkville, with a sample scarcely inferior, thus showing the adaptability of this fine variety to most parts of the country.

The Spitzenberg, Baldwin, Rhode Island Greening and Roxborough Russet—four varieties now well known and universally esteemed, were displayed in great force, and of the very finest quality.

The best samples of Golden Russets of Western New York were from the Niagara District, where it has been considerably planted by growers for market, and is gaining a decided reputation as a profitable market apple.

The Swayzie Pomme Grise, one of our most delicious winter dessert apples, has not yet found its way into very general cultivation. The best samples were from Niagara, where it has been long known and highly esteemed. We cannot here refrain from a word of commendation upon the decision of the judges, who evidently were not influenced by size merely, but awarded the prizes to the best developed specimens of the true and normal type.

The Northern Spy is gradually working its way into the esteem of the Canadian fruit growers, if we may judge from the number of plates of this variety and the excellence of the samples. The tree is tardy in coming into bearing, and will not yield its fruit in perfection to the negligent cultivator; but the tree is hardy, and from its habit of putting forth its blossoms quite late, the fruit often escapes a late spring frost that nips its more adventurous neighbors, while in quality for table or kitchen use, and in beauty of appearance, it has few equals.

There were quite a number of seedling apples offered in competition, the most of which, in the opinion of the judges, exhibited no distinguishing quality of excellence. But there were two plates of these which were notable exceptions, and to which the prizes were awarded, the first exhibited by Mr. John Shuttleworth, of Weston, and the second by Mr. W. Forfar, of Agincourt.

Mr. Shuttleworth's seedling bore a very marked resemblance to the St. Lawrence, but when tested with that variety seemed to be a later sort and of a more sprightly flavor. This seedling should be sent to the fruit committee of the Fruit Growers' Association, with a full account of its origin, and the character of the tree, in competition for their premium of fifty dollars.

The collections of twenty varieties of pears and of ten varieties embraced some of our very best and most valuable sorts, but some of those most usually seen at our exhibitions were doubtless ripe and gone some time ago. Yet we never saw finer samples, more even and perfect, than those to which the first prizes were given, and they certainly reflect great credit upon the skill and taste of the worthy President of the Fruit Growers' Association, Rev. R. Burnett, of Hamilton. Were others of our clergy to emulate his example, and seek for rest and refreshment to their wearied mental energies and social sensibilities in the soothing and healthful culture of the fruit or flower garden, they would be much the gainers in bodily health, and their people in better sermons.

Bartlets were too far gone—only two plates, and these fast going to decay, put in an appearance.

White Doyenne has spotted and marked so badly in the United States that it is not much planted now by our neighbours over the border, but the specimens shown here manifest no symptoms of trouble from this cause, and were most noble specimens of this much-valued sort.

No one of our pears seems to be so widely adapted to the various parts of the Province as the Flemish Beauty. The tree is very hardy—one of the most hardy, and the fruit is both of large size and fine quality. The plates shown were very fine indeed, and fully sustained the high reputation of this pear for beauty and quality.

The Louis Bonne de Jersey is a variety so productive, and of such pleasing appearance, that it has become a general favorite, notwithstanding that it is not of the very highest quality.

On the other hand the Belle Lucrative is a fruit of the highest quality, but has been so little cultivated that only two plates were shown for this variety, and of these only one shown by Mr John Sharman, of Oakville, was the Belle Lucrative.

If greatness be a quality of goodness, then surely the Duchesse d'Angouleme on exhibition were of the highest degree of goodness. We heard one of the most experienced of the judges in this department remark that he thought he had never seen such monstrous pears. Mr. Robert Stibbard, of Eglinton, who bore off the palm, should tell his less fortunate brothers in fruit culture how he grows such monsters.

Were the tree of the Beurre Bose only a little more hardy, we are sure it would soon become a favorite sort. In symmetry of form, fine cinnamon russet colour, and rich, juicy, spicy flesh, there is nothing to be desired. There were not many plates exhibited, and the two prizes were taken by Niagara where probably it finds its most congenial climate,

Beurre Clairgeau will doubtless be found to thrive and fruit well over a larger portion of the country; for we find that Mr. George Murray, of York Township, carried off one of the prizes. It is comparatively a new sort, but one which will probably find favour on account of its fine size and appearance.

It is too soon to get many specimens of Clapp's Favorite, for which a prize was offered, but no samples appeared on exhibition. This new variety has been very highly commended, and is well worthy of a trial at the hands of lovers of good fruit, and it has been well done to draw attention to it by the offer of a premium.

Winter Nalis is one of our very best winter sorts, and the samples shown are of the highest excellence. It succeeds well over a large part of the country, which might be inferred from the fact that the first prize was taken by Mr. W. A. Smith, of Brantford and the second by Mr. J. Young, of Hamilton.

The mysterious pear blight seems to be particularly fatal to the *Gloire de France*, but the specimens here shown demonstrated that the trees do sometimes live and bear most noble samples of this fine winter pear.

The Vicar of Winkfield is another of those very productive kinds which have been a good deal disseminated, and if ever well developed specimens could be a guarantee of fine flavour, these should secure that very desirable quality; but the sort is

one of great fickleness, bringing to mind Virgil's description of woman, "*vanum et mutabile semper femina.*"

In any other variety of fall pear the competition was very spirited; but Mr. W. R. Warran, of Niagara, distanced all competitors with a plate of the very finest Seckels—a variety that has no peer for quality; and Rev. R. Burnet, of Hamilton, justly won the second, with fine samples of Beurre d'Anjou—a variety that promises to be one of our most valuable late sorts.

It is too late in the season to expect a good display of plums: hence, although the crop in many places has been very fine this season, the number exhibited is quite limited. One exhibitor, with commendable zeal, endeavoured to preserve a number of varieties beyond the period of ripening for the purpose of exhibiting them, but the acid preparation in which they were kept so destroyed the flavour that the judges could form no opinion of their quality beyond their size.

What is true of the plums is also to be said of the peaches—the time of the Exhibition is too late for any display of good peaches. A few are shown, but they are, like all late peaches, lacking in richness, sweetness and delicacy of flavour.

The display of grapes grown in open air was large, and gave evidence of increasing attention to the cultivation of this fruit. The number of varieties is constantly increasing, and quite a number have been found to be every way reliable in our climate.

There were some thirty varieties shown by Mr. James Taylor, of St. Catharines, who has paid no little attention to the cultivation of the grape, and exhibited samples of great size and beauty, which received the first prize.

The Concord variety was shown in considerable quantity, and is evidently succeeding over a large part of the country. The vine is hardy, and a very abundant bearer.

There were a good many plates of the Delawares shown also, one of the sweetest grapes grown successfully in the open air. The prize samples came from Niagara, and were most beautifully ripened.

It is too late to expect many samples of the Adirondac, which is an early ripening sort; but the prize sample, shown by Mr. Thos. Brownlie, of Scarborough, proves that it can be well grown on the north shore of Lake Ontario.

The Diana has now been quite extensively disseminated, and it is gratifying to find that so good a grape is grown, and ripened in such perfection, in Toronto and York Township, that the grapes from this locality carried off both prizes. It is said to be an excellent variety for the manufacture of wine, and that the prize wines were made from this grape.

The Creveling is a very early ripening sort. The prize samples came from St. Catharines and Scarborough, showing that it thrives well in quite different localities. The fruit is of fine quality, but the vines do not always set well, thus often giving the bunches a very loose and straggling appearance.

The Hartford Prolific is also early, and evidently grows well in Scarborough and at Goderich. It is hardly equal in quality to either Creveling or Adirondac.

A large number of Roger's Hybrids, were shown.

These are very large in berry, not uniform in bunch, most of them quite hardy and ripen in good season. The best bunches of Rogers, number 19, came from York Township, which show that some well thrive over a large part of the Province.

The Catawaba will not usually ripen well in Ontario, but Mr. Durand, of Niagara, exhibited three clusters of this variety that fully equalled any, even the best we ever saw, from the famed islands of Lake Erie.

The Iona is comparatively new, and many fears are entertained lest it should not be found to thrive in most parts of the Province, but Mr. J. B. Hay, of Waterdown, exhibited some very well ripened clusters.

There were but few plates of grapes grown under glass in the general list, but the few that were shown are of fine quality. It is to be hoped that our residents in those parts of the land where the finer out-of-door grapes cannot be thoroughly ripened will avail themselves of the hints given in horticultural publications upon the cheap construction of glass houses, and enjoy the comfort of delicious grapes grown under glass.

There was a considerable display of water melons, and some green and scarlet flesh melons, but in October they cannot be of a very fine quality.

There were a few entries of domestic wines, but it was evident that very few yet understand the art of making wine from grapes.

In the professional list there was a very fine display of fruit of every sort, in which Mr. Leslie's, of Toronto, nurseries were most prominent, ably followed up by J. A. Bruce & Co., of Hamilton; James Dougall, of Windsor; D. W. Beadie, of St. Catharines, J. & J. Gray, of Toronto; Chas. Arnold, of Paris; and C. E. Woolverton, of Grimsby. The country owes much to the enterprise and labours of these gentlemen in the distribution throughout the Province of such excellent and truly valuable and profitable fruits.

The collection of fruits shown by the Hamilton Horticultural Society, to which was awarded the first prize, is a truly magnificent display of all kinds of fruit contested keenly by the Galloway Club of Lincoln County.

The display of garden vegetables of all kinds was large, and gives evidence of increasing interest and attention in this department of horticulture. A liberal variety of garden vegetables should be enjoyed by every well-to-do farmer, yet we venture to say there are very many who give no attention to the cultivation of the garden.

The celery exhibited is good, the onions as handsome as any could wish, and tomatoes and capsicums in the greatest profusion. We noticed that in winter squashes the variety known as the Hubbard, carried off first, second, and third prizes; and the first prize for the best six varieties of potatoes for table use was given to the Garnet Chili, Goodrich Ash-leaved Kidney, Breex's King of the Earlies, Breze's Prolific, and Early Rose.

There was nothing of much interest to be found in the floral department, unless we except some really beautiful dahlias, in which Messrs. Leslie & Sons take the lead. Of these we name Lady Hubert, Queen Mab, Bird of Passage, Peri, Stafford's Gem, and Triumph, as being very fine indeed. It can be no matter of disappointment that the display of

flowers should be limited; the only wonder is that the frost had not cut them down out of doors, so that the only resource would have been in greenhouse plants.

In closing this hurried sketch of the horticultural department of the exhibition, we can truly congratulate its friends on the continued evidence of progress, and an ever increasing taste among the people for skill in the cultivation of these finer products, for which so large a part of the Province is most admirably adapted.

Our Country.

HARVEST OF 1870.

GRAND TRUNK REPORT.

BUFFALO AND GODERICH DISTRICT.

GODERICH.—Fall wheat, not over a quarter of a crop, spring about half, attributed to wet weather; barley, an average, but dark in color; oats, large yield, 50 or 60 bushels to the acre; peas, fully an average; hay, large crop; owing to wet weather when cutting a large quantity badly saved; potatoes, turnips, and other roots, a large yield; plums, a good crop.

CLINTON.—Fall wheat is almost a failure, having been winter-killed; spring wheat, a very poor crop, will not average more than 10 bushels to the acre; barley, dark in color, a good deal sown, will average 30 bushels to the acre; oats, a good crop, will average 35 bushels per acre; hay, an average crop; corn, flax, and rye, none sown; root crops are very good; potatoes are beginning to rot in some places.

SEAFORTH.—Spring wheat, yield 12 bushels per acre, sample good; fall wheat, yield 10 bushels per acre, sample very good; oats, yield 40 bushels per acre, sample very good; barley, yield 30 bushels per acre, sample very bright but small; peas, yield 25 bushels per acre, sample very good; potatoes yield above the average, and good; other root crops look well, and promise a good average yield.

CARRONBROOK.—The wheat crop is very defective, both fall and spring; fall wheat was almost a total failure, and yields only 10 bushels per acre; spring wheat is still worse, and will not yield above 5 bushels per acre, and in several instances will not be threshed at all. This relates to the late sown spring wheat; that which was sown earlier in the season has turned out somewhat better, and will probably yield 15 bushels to the acre; barley is a fair crop, and will average 25 bushels to the acre; oats are good, and will yield 40 bushels to the acre; peas are an average crop, and may be reckoned at 20 bushels per acre; potatoes promise an abundant yield; hay is plentiful, but owing to the wet weather when cut was but very imperfectly saved.

MITCHELL.—Fall grain has been severely damaged by frost, and hundreds of acres had to be plowed up, and the land sown afresh; fall wheat, 10 bushels per acre; spring wheat, 18 bushels per acre; barley, 20 bushels per acre; peas, 3 bushels per acre; oats, 40 bushels per acre; potatoes, fair crop, average yield not yet known; other root crops abundant; flax has been extensively cultivated, owing to the erection of a magnificent flax mill, and many fer-

mers gladly availed themselves of the opportunity of replanting the ground with flax where wheat had been a failure; hay, fair crop, quality not quite so good as might be wished, owing to the wet season.

TAVISTOCK.—Fall wheat, 18 to 20 bushels per acre, good quality; spring, 23 to 25; barley, 25 to 40; peas, 20 to 25; oats, 40 to 45; flax, 12 to 15; hay 1½ tons per acre; root crops, with the exception of potatoes, which have been affected by rot, are very fair.

BRIGHT.—Crops in this vicinity are good, with the exception of wheat, and will turn out the following to the acre:—Fall wheat, 10 to 15 bushels per acre; spring wheat, 10 to 15 per acre; peas, an excellent crop, and will give from 25 to 30 per acre; oats, heavy, 40 to 50 per acre; barley, 20 to 25 per acre, sample good; flax, very good; roots of all kinds very good yield; potatoes, good, but have appearance of the dry rot; fruit, &c., good.

DUNSMO.—The weather during the harvest was wet, and much grain was spoiled in consequence. Fall wheat, a very light crop, will not average more than 12 bushels per acre; spring wheat, also light, average 14 bushels per acre; barley, was largely sown, but will not be an average crop, yielding only from 9 to 10 bushels per acre; the early sown peas and oats are a good crop, the former 30 and the latter 40 bushels per acre; the late sown of both kinds are a very light crop; hay, an excellent crop; flax largely sown and a good crop; Indian corn, the largest crop that has been known for many years; carrots, turnips, potatoes and all other root crops, much above the average.

PARIS.—Fall wheat extensively sown, but scarcely an average crop, it having been badly winter-killed, sample good, yield from 18 to 20 bushels per acre; spring wheat, not cultivated to any extent in this vicinity; barley, under the average crop, sample dark, will yield from 23 to 28 bushels per acre; oats, not largely cultivated, yield good; peas, injured much by mildew, consequently will not give an average crop, 18 to 20 bushels named as probable yield; corn, buckwheat, rye and flax are not cultivated to any extent; hay, a good crop and well saved; potatoes, a very good crop, and a large yield expected; turnips and carrots, not good, under the average yield anticipated; fruit and vegetables, very good; apple crop, the best known for years.

BRANTFORD. Fall wheat somewhat damaged by being winter-killed, yield will average from 15 to 17 bushels per acre; spring wheat, but little sown; barley, yield a full average crop and quality very fair; oats, a good crop, yield 45 bushels per acre; peas, a good crop, yield 25 bushels per acre; root crops, in general, are all good in this vicinity, with a full average yield.

CALEDONIA.—Crops, although very good, will scarcely equal those of last year; fall wheat will average say 15 bushels per acre; spring wheat, generally poor; barley, short crop on account of rain, quality fair; oats, very good yield; peas, good; roots, an excellent crop; fruit, plentiful; taking the year as a whole it will compare favorably with former years.

CANFIELD.—The crops have not been quite an average yield, with the exception of root crops and hay, which were very good; wheat, barley, &c., yielded from 15 to 20 bushels to the acre. Season unfavorable.

DUNSVILLE.—The crops are excellent; fall wheat

a good crop, about 30 to 35 bushels per acre, an average quantity sown and well saved; spring wheat, more than unusual sown, about an average yield, about 20 bushels to the acre; barley, a very heavy crop, will average 33 to 40 bushels per acre, large quantity sown; oats, over an average crop, large quantity sown, will average 50 bushels per acre; peas, about the same quantity sown as last year, an average crop, say 25 bushels per acre; potatoes, turnips, carrots, and other roots, garden vegetables, &c., cannot be surpassed; flax, average same as last year, very little grown.

PORT COLBORNE.—General yield of grain crops, about average; root crops, good; corn, very good yield; fall wheat, 13 bushels per acre; oats, 25 bushels per acre; barley, 15 bushels per acre; corn, 40 bushels per acre; no flax grown.

FORT ERIE.—Fall wheat averages 12 bushels to the acre; spring wheat, 15 bushels per acre; oats, 30 bushels per acre; barley, 30 bushels per acre; peas, not grown; flax and hemp, not grown; root crop, over an average.

WESTERN DISTRICT.

DETROIT.—Spring wheat is comparatively a light crop; fall wheat, fully an average crop in quantity, the yield per acre is larger than has been anticipated; about five-sixths of the amount is white, the balance amber. In some localities the crop was injured by sprouting in harvest, but the average is fully equal to that of ordinary years; corn, the largest crop that has ever been harvested, and the quality above the average; oats, a large crop, above the average, and the quality good; barley, the yield is good, below rather than equal to the average in quantity. The quality is not by any means good, heavy rains about harvest time caused it to become very discoloured, so that there will be very few samples of good quality; peas, not cultivated considerably; potatoes, there were not nearly the same number of acres planted this season that there has been in former years, and is estimated that the crop will not exceed three-fourths of an average, the quality is good; onions, very near this city there are probable 100,000 bushels of onions raised, which is more than an average amount. The quality is good, the only deficiency being size; apples, in quantity the crop is very large, above the average, the quality is good; peaches, ordinarily a very large crop, but this year far below the average, both as to quantity and quality.

UTICA.—Harvest rather late on account of rains. Wheat, an average quality, good, yield about 35 bushels per acre; corn, over the average; oats the same, about fifty bushels per acre; corn, about 100 bushels per acre; no barley around this section; rye, average crop; hay, very good; buckwheat, very heavy crop; potatoes, good crop; turnips, good; fruit, very plentiful.

RIDGEWAY.—Wheat, very little spring wheat grown; fall wheat, lighter but quality good, average about 15 bushels to the acre; no barley grown; oats very good, about 40 bushels to the acre; corn, very good, average about 40 bushels; potatoes, the only root crop grown for sale, not dug yet, yield will be light but quality good; hops, not grown this year; apples, in abundance, other fruits a failure.

SARNIA.—Fall wheat injured somewhat by the severe winter, with its frequent alternative frosts and

thaws, and spring wheat and other crops injured by the drought in the early part of spring and succeeding heavy rains; in low land the crops have been more or less destroyed by water; the principal cereals sown are wheat, oats, barley, and peas; average yield—oats, 40 bushels to the acre, generally a fair crop; barley, 40 bushels to the acre, generally a fair crop; wheat, 15 bushels to the acre, half an average crop; hay, a fair quantity stored, but some in damaged condition; peas, 55 bushels to the acre, crop below average; potatoes, 200 bushels to the acre, excepting in low lands, where the crop is injured by heavy rains; turnips, 800 bushels to the acre.

CAMLACHIE.—Fall wheat, little sown, average about 12 bushels per acre; spring wheat, poor, average about 8 bushels per acre; oats, good, average 50 bushels; peas, poor, much destroyed by water; barley, is not an average; hay, the crop was good, but was very much hurt by frequent rains; root crops, fair; fruit abundant.

FOREST.—The yield will be about as follows:—Fall Wheat, about 12 bushels per acre; spring wheat, about 10 bushels per acre; peas, about 12 bushels per acre; barley, about 20 bushels per acre; oats, about 40 bushels per acre; hay, average crop; root crop, poor; many fields of potatoes were not hoed on account of so much rain.

PARK HILL.—Fall Wheat, 17 bushels per acre; spring wheat, 15 bushels per acre; peas, 22 bushels per acre; oats, 30 bushels per acre; barley, 28 bushels per acre; fine sample potatoes, fair crop; other roots, light; hops, fair average and good colour; no flax grown.

LUCCAN.—Hay, good crop, and pretty well saved; wheat, "Treadwell" and "Souls" best crop, 14 to 18 bushels per acre; midge proof 8 to 10 bushels per acre; spring sown, poor crop, 8 to 10 bushels per acre; samples of all kinds fair; barley, an average crop, about 30 bushels per acre, samples rather strained; peas, about 20 bushels per acre; oats, good crop, 40 to 45 bushels per acre; roots, not much breadth sown, but yield good.

GRANTON.—Fall wheat, what escaped frost in the winter, yields about 21 bushels per acre; spring wheat, almost a failure, average will not exceed 8 bushels per acre; barley, a great deal sown, yields about 22 bushels per acre, quality middling; peas, good average, yield 25 bushels per acre; oats, good crop, yield 48 to 50 bushels per acre, good quality; flax, a good crop, will yield about 2 tons per acre, not much sown, and worth about \$13 per ton; roots, ten or fifteen per cent., above an average crop.

LONDON.—Fall wheat, about an average crop a portion damaged and sprouted by the weather during harvesting, average 12 to 15 bushels per acre; spring wheat, small crop, samples various, but generally fair; barley, about an average crop, much stained, and in poor condition, samples very indifferent; peas, a light crop, samples uneven and much discoloured, owing to heavy rains; oats, crop above the average, samples good, but light in weight; rye, small crop, not much grown in this locality, samples sound; corn, fair crop, grown only for home consumption; mangold wurtzel, turnips, and potatoes, large crop, and samples very fine; hops, crop small, and samples not an average; hay, large crop, but very badly saved, a large quantity of bad hay in the vicinity.

THORNDALE.—Fall wheat, fair crop, will average 25 bushels per acre, "Treadwell" and "Leal" gave best yield; spring wheat will scarcely average 10 bushels per acre, Glasgow sample the best; barley, light and small, will yield 25 bushels; oats, good, about 40 bushels per acre; flax, fair crop and a good deal raised; corn, fair yield; peas, light and small, 15 bushels per acre, will be about an average return; hops good, (about 25 hop yards in this township); potatoes, fair yield, except where flooded over; other roots, scarce.

ST. MARY'S.—Fall wheat, about one-fourth winter-killed, remainder a fair crop, housed in tolerable order; spring wheat, about one-third short of an average, quality medium; peas, much injured by insects, yield about same as last year; flax, a very fine crop in every respect, yield fully one fourth more than last year; potatoes, threatened with rot, owing to wet weather; oats, an average crop, in quantity and quality.

STRATFORD.—Fall wheat is less than an average crop, but sample is very good; yield about 20 bushels per acre; there was a less average than usual under fall wheat, as a good deal of it was ploughed up in the spring. Spring wheat will average about 15 bushels per acre, and the sample is very ordinary; there was about the same breadth of land sown as last year, but the yield is less than the average in quantity and quality. Barley, about an average crop, sample not very good; oats are considerably above the average, estimated at 45 bushels per acre, samples not as good as last year; peas are very good in quality, yield will be about an average; hay, a very heavy crop, considerable quantity of it injured by rain at the time of harvesting; flax, a very heavy crop, both in fibre and in seed, more than the usual breadth of land was sown this year; potatoes, a splendid crop, but are rotting very badly owing to excessive rains; turnips and other root crops are good, and will yield at least an average.

SHAKESPEARE. Fall wheat, good sample, and will average 20 bushels per acre; spring wheat, average 15 bushels; barley, good, will average 30 bushels; oats, extra good, average 50 bushels; peas, average 30 bushels; flax, an average crop; roots, an average crop, except potatoes, which are injured by the rot; fruit, good and plentiful.

HAMBURG.—Fall wheat, a large quantity sown, but some of it winter-killed, yield about 15 bushels per acre; spring wheat, a large breadth sown, but the yield will not be as good as last year, it will be about 12 bushels per acre; peas, barley, and oats are a first rate crop; peas will yield 25 bushels per acre; barley, 35 bushels per acre, and oats 55 bushels to the acre; flax, a large quantity sown and is a good crop; potatoes would be a splendid crop but for rot, which is likely to destroy a large quantity; turnips promise a good crop; fruits of all kinds are abundant; hay crop, good. The quality of all the different grains is excellent.

BADEN.—Fall wheat is not an average crop as to quantity, but the quality is very good; spring wheat is nearly an average yield, and the quality is also good; barley and oats are more than an average crop, both as to quantity and quality; root crops promise an abundant yield; flax is also a good crop.

PETERSBURGH.—The crops in this section of the country (taking them on the whole) are good, and will average about as follows:—Fall wheat from 18 to 20 bushels per acre; spring wheat, from 20 to 25

bushels per acre; oats, 50 to 55 bushels per acre; barley, 50 bushels per acre; peas, 20 bushels per acre. From present appearance all root crops are likely to be very good. There is a considerable amount of flax grown in this neighborhood, but the yield of seed will be small.

BERLIN.—Fall wheat is certainly below the average yield, about 15 bushels to the acre, was in part winter-killed, and there was a good deal ploughed up in the spring; the grain is generally a good sample; spring wheat, not an average crop, not more than 12 bushels to the acre; was too wet in the spring, at seed time, and more or less midged, a gr at deal sown, however; oats, a good heavy crop about here and north of this and well saved on the whole; barley, hardly an average crop, good bearing however, but not as bright as last year; coarse grain and root crops so far first rate and promise a heavy yield.

BRESLAU.—Fall wheat, average crop; spring wheat, from 12 to 15 bushels per acre; coarse grain, full average; flax good; root crops all good; and hops an average crop.

GUELPH.—Fall wheat will average about 20 bushels to the acre, and spring wheat about 12 to 15 bushels per acre; this is considerably below the general average, and is caused by midge, blight, &c.; miles round the shortness in yield is the same. Barley is a fair crop and will yield something like 25 to 30 bushels per acre; oats, very good, will yield 40 bushels per acre, at least, which is more than the general yield in this district, the season upon the whole being more favorable; peas can be considered as a good crop, and will yield 25 bushels per acre of an excellent quality, hay is under the usual expectation, and will not weigh more than 1½ tons per acre; root crops, very good indeed, and are expected to give satisfaction.

ROCKWOOD.—Fall wheat will average 20 bushels to the acre; spring wheat will average 15 bushels to the acre; barley will average 35 to 40 bushels per acre; oats will average 40 to 50 bushels per acre; peas will average about thirty bushels to the acre; the root crop looks well, and there is every indication of being a large yield; no flax grown in this vicinity.

Ac. on West. Fall wheat, 20 bushels per acre, good quality; spring wheat, 15 bushels per acre, inferior quality; peas, 25 bushels per acre, very fair; barley, thirty bushels per acre, very bright, good sample; oats, 35 bushels per acre, very bright, good sample; hay an exceedingly heavy crop and well saved; hops are very extensively cultivated in this section and yield abundantly this season; roots promise a very heavy crop; fruits generally have been all that could be desired, especially apples and plums.

LIMEHOUSE.—Fall wheat, a poor crop, will average about 15 bushels per acre, good quality; spring wheat about 20 bushels, quality good; barley, oats and peas a good crop; all root crops are expected to be abundant, owing to the late rains; no flax grown in the neighborhood; hay, a good crop.

GEORGETOWNS.—Crops will scarcely reach the average of former years; fall wheat was badly winter-killed and will not exceed 15 bushels per acre; spring wheat, on some land good, in other places very poor, and may average 20 bushels per acre but not more; barley is a good crop but less grown than formerly; peas are rather under the average, but

oats are a heavy crop; root crops are good; the cultivation of flax has ceased in this vicinity; hops are extensively grown but are reported very much under the product of former years.

NORVAL.—Fall wheat considerably winter-killed, will average 25 bushels per acre; spring wheat a good crop, will average 22 bushels per acre; oats a large crop, will yield 30 bushels per acre; peas a fair crop, with average yield; hay good on new meadows; potatoes a good crop, will yield large returns.

BRAMPTON.—All sorts of grain are about an average in quality and yield; fall wheat, slightly winter-killed, average 20 bushels per acre; spring wheat, fair crop, averaging 15 bushels per acre; barley, fair crop, average 30 bushels per acre; oats, fair crop average 40 bushels per acre; peas a fair crop, average 25 bushels per acre; hay, crop good, but not very well saved on account of wet weather; root crop, good and will be fully an average; no flax.

MALTON.—Fall wheat will not yield as much as last year, a large quantity having been killed by the great depth of snow last winter, the grain is very plump, and will yield 30 bushels per acre; spring wheat, good, say 28 bushels per acre; barley was early laid by heavy rains, grain ripened before properly filled, will weigh light and is badly colored, yield about thirty bushels; oats are almost a complete failure, having been injured by continuous rains and by rust, in many places they are not worth cutting; will scarcely yield twenty bushels per acre; peas, not as good as usual, in many places killed by wet, will yield about 25 bushels; corn very good, but not much sown; hay was light and greatly damaged by rain; very good prospects of heavy crops of second growth clover; potatoes on high land very good, full and sound but in low lands are rotting; turnips and carrots, about an average; no flax sown in this neighborhood; apples, good, but will yield less than last year.

WESTON.—Fall wheat, in quality good; yield 35 to 40 bushels per acre; spring wheat, in quality very good, 20 to 25 bushels per acre; oats, very light, poor, caused from rust; peas, quality very good, yield 25 to 30 bushels per acre; barley, good, little colored; rye and corn, none; hay, light crop; root crop promises very well.

CARLTON.—Crops about an average; fall wheat, 20 to 25 bushels per acre; spring wheat 15 to 20 bushels per acre; barley, 30 to 35 bushels per acre; peas, 35 to 40 bushels per acre; oats, not so good as last season, will average about 30 to 35 bushels per acre; root crops are looking very well especially the potato crop, which will be over an average; no flax grown here.

CENTRAL DISTRICT.

Toronto.—The samples of fall wheat are very good, but the yield is small, owing to a good deal having perished in the winter, the average per acre will scarcely be twenty bushels; spring wheat is a fair crop, the yield being about equal to last year, and quality somewhat similar; barley averages about thirty-five bushels to the acre, the berry being plump, and in colour somewhat dark, probably not quite so much as last year; oats are very thin and light, so much so that some farmers did not take trouble to gather them in bundles, but raked

them into heaps; peas are not carrying out their early promise, the late rains having caused a good deal of mildew, and it is now feared that the crops will be under the average; beans, rye and corn are not grown to any quantity around Toronto; the root and vegetable crops are expected to give a very fair yield, the late rains having considerably improved the former, and potatoes, as a rule, in this district, are so far free from disease. At a rough estimate this city will probably receive from this year's harvest about two and a half million bushels of grain, and about one hundred and twenty thousand barrels of flour.

SCARBORO'. Fall wheat very little sown; spring wheat yields 14 bushels per acre, sample good; oats yield 30 bushels per acre, sample good; peas, 20 bushels per acre, quality, not very good; root crops look excellent; no flax growing here.

PORT UNION.—Fall wheat, none; spring wheat, about 20 bushels to the acre, quality good and well saved; barley, about 30 bushels per acre; oats, excellent and will turn out about 40 bushels per acre; peas, say from 25 to 30 bushels per acre; hay, light crop; potatoes, an unusually good crop; turnips, poor crop.

FRENCHMAN'S BAY.—Fall wheat, an average crop; spring wheat, considerably under an average; barley, oats and peas, an average; no flax grown in this locality; root crops, such as turnips, carrots and potatoes, are likely to be fully an average crop.

DUFFIN'S CREEK.—Wheat, about 10 bushels an acre; barley, 20 to 25 bushels an acre; peas, an average crop; early sown oats are good, a great quantity sown late are rusty and will be a poor yield; hay, light crop; roots looking well.

WHITBY.—Fall wheat, about two-thirds of a crop, say from 15 to 18 bushels to the acre, of a good quality, about an average quantity sown; spring wheat, not more than half a crop, about 10 bushels to the acre, a good sample, more than an average quantity sown; barley, about three-fourths of a crop, 20 bushels to the acre; oats very poor crop, over an average quantity sown, not more than 25 bushels to the acre; peas an average crop, say 45 bushels to the acre, good sample and well saved; potatoes, a good crop; but showing indications of rot in heavy, low lands; carrots, mangold wurtzel, turnips, &c, every indication of a good crop, but not yet gathered.

OSHAWA. Hay, very light and not an average crop; wheat very light crop, average not over ten bushels per acre; barley, average fifteen bushels per acre; peas, average twenty bushels per acre; oats, an average crop; root crops, good, quality of grain very fine, having been secured in splendid condition.

BROMANVILLE.—Hay crop about an average; fall wheat, little sown in this vicinity; spring wheat below the average crop, and barley the same, but both good samples; peas and oats, a full crop; root crops looking well, and an average expected; no flax sown in this neighbourhood.

NEWCASTLE.—On account of the extreme heat and drought of the past summer, the crops are not as heavy as usual. Wheat (chiefly spring) will not produce over 12 bushels per acre. No rust, no insect. Barley, about 20 bushels, fair sample; oats, peas and rye, average crops; roots, look promising.

PORT HOPE.—Fall wheat, average breadth sown,

crop light, quality good, yield sixteen bushels per acre; spring wheat, average breadth sown, quality good, yield 8 to 10 bushels per acre; peas, average breadth sown, good crop, yield 15 to 10 bushels per acre, sample very good; barley about an average crop, a fair sample, yield 30 to 35 bushels per acre; flax, none grown in this vicinity; roots an average crop in some localities, suffered a little from dry weather and insects.

COBourg.—Wheat, both spring and fall, light, not expected to be much more than half last year's yield; the fall wheat was much damaged by frost and will not yield more than 12 to 14 bushels per acre, sample good; oats and barley are turning out well and will be a full average crop; hay, short crop, owing to the hot, dry spring; potatoes, not many raised yet, but are expected to turn out a full crop; no appearance of disease this year; roots, very light, particularly turnips.

GRAFTON.—Hay, about average; fall wheat, spring wheat and barley, under average; oats over average; roots, prospects of good yield.

BELMONT.—Fall wheat will average about 20 bushels to the acre; spring wheat, about 16 bushels; both spring and fall wheat were considerably damaged by drought in the early part of the season; rye, very poor, about 10 bushels to the acre; barley, a good crop, say 30 to 35 bushels to the acre; peas, also good, average 20 to 25 bushels; oats, the best for years, will reach 40 bushels to the acre; hay, about an average; buckwheat promises well and a considerable breadth sown in this neighbourhood; hops, very extensively grown and will not exceed an average; roots, such as turnips, &c, good; potatoes, a splendid crop; apples, very good, the best for years; corn, not much planted, but what there is looks well.

TRENTON.—Fall wheat, 15 bushels to the acre; spring wheat, 14 bushels to the acre; rye, 10 bushels to the acre, but very poor crop; hay, 1 ton per acre, poor yield; oats, very good crop, 30 bushels per acre; barley, fair crop, 20 bushels per acre; peas, good crop, 20 bushels per acre; flax, none grown; potatoes, fair crop, 100 bushels per acre; other root crops, under the average yield, not much grown in this vicinity; apples, good crop; also fruit in general, good crop; Indian corn, very good crop, 30 bushels to the acre; buckwheat, very poor, blighted.

BELLEVILLE.—Fall wheat only sown to a limited extent, very poor crop, quality middling; spring wheat, on the / oat, a poor crop, but somewhat better in the rear townships, on the whole there is considerable falling off as compared with last season, quality good; barley, on y about half the yield of 1879, quality fair, and of good colour; rye, considerable, below an average crop and of an inferior quality; oats and peas, an excellent crop, last season's was considered to have been the best for years, this season's will be superior both in quality and yield; corn, a large quantity under cultivation and promises to be an unusually good crop; hay, about one-quarter of an average crop, tolerably housed, a large quantity of old hay still on hand; potatoes, promise an abundant yield, and as far as I can learn free from rot; other root crops will be considerably below an average; flax, not cultivated in this locality.

SHANNONVILLE.—Wheat will be about two-thirds crop, straw short; oats and peas will be an average

crop, good straw and well saved; rye, will not be more than half a crop and straw short; barley, will be about two thirds crop, straw good; buckwheat, if not killed by frost, will be an average crop, looks well at present; hay, will not be half crop, but a good supply of old hay from last year; roots of all kind; will be good; potatoes and corn look good; flax none raised here.

TYENDINAGA.—Hay crop, quality good, average yield from three-fourths to one ton per acre; spring wheat, of good qualities, average yield from 15 to 20 bushels per acre, barley a medium quality, average yield from 20 to 25 bushels per acre; peas of good qua ity; average yield 20 to 25 bushels per acre; oats, of good quality, average yield 25 to 30 bushels per acre; fall wheat, rye, and corn, very little grown, potatoes of medium quality, a good many small ones, average yield from 100 to 150 bushels per acre; turnips, m ngolds and carrots, none raised of any account; flax, none grown in this vicinity.

N PANEE.—Spring wheat will not yield more than 10 bushels to the acre, and quality only middling; fall wheat, scarcely any raised; barley only half a crop, but quality very good; peas, an average; rye, poor, not more than 10 bushels to the acre; hay, light, half crop; root crops, poor, with the exception of potatoes, which are a splendid crop.

KINGSTON.—Little fall wheat grown in this section; spring wheat, a very deficient crop, but the sample brought to market good; barley, largely cultivated, the yield not nearly so good as that of last year, berry bright, having been well secured, straw stunted; grain, light in weight; seeding time for rye was bad, consequently but a small breadth was sown; peas are the best crop harvested around Kingston this year, and are of excellent quality; hay short, scarcely a third of last year's crop; potatoes, large yield, are good; turnips, few fields laid down, crop poor.

ERNESTOWN.—Hay, less than half a crop, but well saved; fall wheat, a small quantity raised; considered yielding 10 bushels per acre; barley 12 bushels per acre; rye, a failure; peas an average crop, 20 bushels per acre; corn, an average crop, but raised in small quantities; oats, full crop, 35 bushels per acre; potatoes, good quality, but owing to so much dry weather the yield considered below the average; root crops and flax are not raised in this vicinity. In the rear of the township the crops are said to be excellent.

GA AN QUE.—The crops in this vicinity have suffered very much in consequence of the drought. Wheat will yield about 10 bushels to 1 sown; oats, about the same, somewhat rusted; peas, an average crop, 9 to 1; barley, a large quantity sown and yield good, 13 bushels to 1; rye, not much shown and remarkably poor crop, average yield 2 to 1; the hay crop is light but good, about half a ton to the acre; potatoes about two-thirds of an average crop; flax and vegetables, none grown.

LANDSDOWNE.—Wheat, oats, rye and barley, an average crop; hay and root crops, light on account of so much dry weather.

MALLORYTOWN.—Crop light but of good quality; fall wheat, little sown; spring wheat, about 12 bushels per acre; barley, 20; rye 16; oats, 20; roots a poor crop; potatoes, an average crop, of good quality; hay, very poor, and not more than half a crop.

This season has been uncommonly dry, which caused crops to be very light.

BROCKVILLE.—Since the middle of May very little rain has fallen; in consequence, grass and grain are light. Yield, wheat (spring) say about 12 bushels per acre; barley, about 15 bushels per acre; oats, about 15 bushels per acre; peas, about 9 bushels per acre; buckwheat, about 15 bushels per acre; corn, about 20 bushels per acre, the berry plump and bright; very little winter wheat and rye sown; hay has yielded $\frac{3}{4}$ ton per acre. Potatoes and other root crops will be probably very good.

MAITLAND.—Fall wheat none sown around here; spring wheat about an average crop, say 15 or 16 bushels per acre; oats, a failure; barley is a very light crop but the quality is good; peas, are an average crop; potatoes and other roots are an average crop.

PRESCOTT.—Fall wheat sown to a very limited extent, much of it has suffered from winter-killing, and consequently has proved a deficient crop, it is below the average, but quality is good; spring wheat is a very light crop, having suffered much from the excessive heat and drought of the season, it is not an average crop but the quality is good; oats a very poor crop, and not an average, being both short in the straw and light in grain; barley and rye are also deficient crops, the barley is rather short in the straw, but the quality of the grain is good; corn and peas are rather light, and, taken as a whole, are considered under the average; although they have suffered much from the dry parching season, promise a good, fair, average crop; turnips, and other root crops, a total failure; hops, an average crop, and much better in quality than for the past two or three years; hay is a very short crop indeed, and considerably under average in consequence of the cold raw spring and dry summer.

MATILDA.—Fall wheat, very little sown, an average crop of good quality; spring wheat, average crop, quality good; oats and barley, about an average crop, quality good; flax very little sown, what there is is good; potatoes, about an average

MORRISBURG.—Spring and fall wheat, above the average both in quality and yield, but little grown for exportation; barley and oats are the staple crops, the former is brighter and plumper than the good crop of last year, and of good average yield; the oat crop is very fine, and above the average in quality and yield, and is with the exception of corn, the finest crop raised this year; corn is the best crop produced for many years; other coarse grains are a good average; peas, extra; hay is about one-third below the large yield of last year, but is very superior in quality, having been gathered in dry season; potatoes and other roots are above the average, and very good; orchards are fine and fruit abundant.

AULTSVILLE. The crops in this vicinity are an average, or nearly so. Fall wheat yields 20 to 25 bushels per acre; spring, 15 to 20; barley, not so abundant as last year, but of a very superior quality. Other coarse grains very good average; hay, short crop; vegetables of all kinds, large crop.

DICKERSON'S LANDING.—The continuous dry weather will bring the crops much below the average. The following is the yield per acre:—spring wheat, 10 to 12 bushels; very little fall wheat sown; oats, 15 to 20 bushels per acre; peas, fair crop, 20

bushels per acre; corn, good crop, but not largely sown; buckwheat, half crop; hay, very poor crop; no flax sown; potatoes, extra good crop; other roots are good yield, but not much sown; very little fruit cultivated in this vicinity, but what is, is a fair yield.

CORNWALL.—Fall wheat, a fair crop, will average 30 bushels to the acre; spring wheat, 25; barley, 25 to 30; oats, 18 to 20; peas, 25 bushels to the acre; buckwheat will be a light crop; hay very light but well saved, about two-third crop; potatoes an average crop and sound; fruit an average crop. On the whole the crop is much better in this vicinity than was expected, considering the very dry season.

LANCASTER.—Owing to the long drought, the yield on the higher lands of grain and roots is very much below the average in bulk and weight, in some cases not worth the expense of harvesting. *Rst* is said to be almost general. Best accounts are from the localities which in ordinary seasons suffer from wet, where the yield is said to be average, and in many instances over it, and of good quality.

COTEAC LANDING.—Fall and spring wheats, scarcely any sown; barley averages 15 bushels to the acre; oats, 15 bushels; peas, 20 bushels; buckwheat would have been about two-thirds crop but for late frosts, which destroyed the greater part of it; no flax sown in this vicinity; potatoes and other roots, about two-thirds crop; grain, on the whole, not more than half a crop, and the straw very short; hay is two-thirds crop.

St. DOMINIQUE.—Fall wheat none; spring wheat, short; coarse grains and root crops have been all affected by the continual dry weather, and are below the average yield; hay is about an average crop.

St. ANNE'S.—Crops harvested in good condition; hay very light, and not above half a crop; spring wheat, fair quality, but light yield, as are also coarse grains, owing to the dry season; potatoes and other root crops promise an average yield, as late rains will still help them; buckwheat almost a failure.

POINT CLAIRE.—Wheat, good, oats, not so much as last year, but of much finer quality; barley very good; peas, good; buckwheat, very good; potatoes have every appearance of being a good crop; not so much hay or straw as last season; root crops have no appearance of a failure in any way, with the exception of onions and cabbages, which are not so plentiful as last year.

MONTREAL.—Barley, oats and peas are the principal cereals; in consequence of drought, the straw of the grain crops is short, but yield good, barley, particularly, turning out bright and heavy; root crops, with the exception of potatoes, have not succeeded well; turnips, carrots and mangolds having all suffered from drought; potatoes are good, and so far have no rot; hay, although not so heavy a crop as last year has been saved in much better condition, and is a fair average in quantity, and much beyond the average in quality. The orchards of Montreal have suffered considerably from dry and heat; the apple crop will be much less than an average, and not good in quality; plums and smaller fruit have succeeded better; market gardening has not been successful this year; cabbage, onions, and many other vegetables have been attacked by worms, which in some cases have destroyed acres of these products.

Arts and Manufactures.

THE ARTS DEPARTMENT OF THE RECENT PROVINCIAL EXHIBITION.

Both the mechanic and fine arts made a most creditable display at the recent Provincial Show, and it were unjust to those who exerted themselves to render these branches of the Exhibition attractive, not to put on record some account of the numerous articles both useful and ornamental, which so well filled the various classes comprised in this department. As in other directions, so in this, progress and improvement were distinctly perceptible. Even in the fine arts, where from year to year in the past there have been those deficiencies which might be reasonably looked for in a new country, and in regard to which perhaps too severe a style of criticism has been indulged in, there was this year a very much to encourage and feel proud of. There were fewer daubs and gaudily coloured pieces, fewer old acquaintances familiar to the eye by successive appearances on such occasions; and a larger proportion of really meritorious new things, proving that we have a race of native artists who already do us no discredit, and may by and by rival Old-World productions in the fruits of their genius and skill. We invite our readers to take an excursion with us through the "Arts and Manufactures" portion of the Show, and to bestow at least a passing look on the more prominent objects in it. In doing so it is impossible to avoid observing the large displays made by two of the most noted machinery manufacturing firms in Ontario, Messrs. McKechnie & Bertram, of Dundas, and Messrs. Goldie, McCulloch & Co., of Galt. The first named of these firms, which devotes its attention exclusively to making tools and machinery for the various mechanics and manufacturers of the country, has earned a very high reputation for the superiority of the work which it turns out, a reputation fully sustained at the present exhibition. This firm had some twenty one pieces of machinery on exhibition, comprising iron turning, drilling, and planing machines, moulding machines, matching machines, tennon and morticing machines, etc. In the collection shown by them we noticed a machine for boring car wheels, the first one of the kind, we believe, ever made in Canada. It is a massive and powerful piece of machinery, and seems fully capable of doing all that is claimed by the makers.

The firm of Messrs. Goldie, McCulloch & Co., of Galt, which has also a very extensive and well earned reputation for getting up good machinery, showed a large and splendid assortment of different kinds of machinery; among them a new steam governor, improved carding and wool picking machinery, wool pickers, cloth shearing, brushing, and pressing machinery, shingle sawing machinery, sash and moulding machinery, planing machines, tennoning and morticing machinery, mill stones and turbine water wheels, all of them apparently of very superior makes. They had also on the ground a stationary

steam engine, double edging machine, sawing machinery, and a quantity of castings. The Brantford Engine Works were represented on the grounds by one of their famous portable engines and saw mills, which were in operation some day during the fair. Charles Levy & Co., of Toronto, showed some planing machinery. Sweet, Barnes & Co., of Syracuse, N. Y., showed a very handsome lot of mowing and reaping machine knives and sections.

Tuttle, Date & Rodden, of the Welland Yale Works showed a most magnificent assortment of field, barn and garden implements, carpenters' and builders' tools, etc. It is not many years since all these articles had to be imported, but now in several parts of Canada there are factories where first-class articles are made. Those shown by Messrs. Tuttle, Date & Rodden cannot be excelled either in quality or finish by any establishment in the United States or elsewhere. From St. Catharines, too, came a large assortment of circular, cross-cut and other saws, shown by J. Flint, who claims for his manufactures superiority over all others both in quality of steel and excellency of finish. He certainly shows some splendid looking pieces of workmanship. The Canada File Works, of Montreal, displayed a large assortment of files of various sizes, shapes and patterns, and said to be very superior articles.

Entering the Palace from the east the first thing that attracted attention was a number of steel amalgam bells, manufactured by Messrs. Jones & Co., of Markham. These bells are already very widely and favorably known, some six hundred of them having been put in use within the past eight or nine years. These bells cost only, about one third the price of the ordinary bells, and are said to be less liable to break with either frost or hard usage.

Directly in front of this entrance was to be seen a lot of carriage makers' requisites and a few carriages. The display in this line was very small this year, though the specimens shown were really good.

There was room however for disappointment at the fewness of the entries. Among the carriage makers' requisites, were a lot of machine made carriage spokes and hubs, exhibited by John Hurd, of Lambeth. Next in order appeared a splendidly finished lot of wrought iron and steel carriage axles, and an assortment of carriage and car springs. We saw one of those springs placed under the test and were satisfied that better satisfaction could not be given. The axles are manufactured at Gananoque, by Messrs. Byers and Matthews, and the springs at the same place by Messrs. Byers and Penn. Among the car springs were some intended for the Toronto, Grey & Bruce and Northern Railways.

Next in order was Patterson's Patent Tire Coupling, by which the use of bolts through the tires of carriage wheels is entirely dispensed with, and the tire can be adjusted to the wheel in a few minutes, saving blacksmith's bills every time the tire becomes loose by reason of the shrinkage of the wheel. Shown by Peter Patterson & Son, Toronto.

In carriages the display was very good. Among them was a lot of four carriages shown by Messrs. J. B. Armstrong & Co., of Guelph, which reflect great credit on their skill and enterprise. Besides this lot, Thomas McBeth, of Richmond Hill, exhibited a skeleton trotting wagon, to which is attached a patent arrangement, by which pole or shaft may be attached without trouble or loss of time. J. Haggaman, of Oakville, showed two carriages with a pa-

tent gearing. The feature in these carriages is that there is no axles, no boxes in the hubs, and no taking off of wheels to oil the vehicle. Hutchison & Burns, of Toronto, showed two very handsome buggies, one covered and the other open. J. & E. Spragge, of Amherstburg, had on exhibition a couple of splendid buggies, one open and the other covered. Geo. Smith, of St. Catharines, showed a magnificent pleasure carriage, a covered buggy and a trotting wagon, all got up in superb style. Noah L. Pi, er & Sons, of Toronto, had on exhibition some beautiful children's carriages.

Coming to the machinery again, the first thing we noticed was an iron manipulator, exhibited by A. J. Whalley, of Markham, the uses of which, as its name seems to indicate, are multitudinous.

Eyre Thuresson, of Ancaster, exhibited two card clothing setting machines, and card clothing. Mr. Thuresson has made a speciality of this business for years, and the card clothing which he turns out has long been acknowledged as the best procurable either in this country, or in Europe. One of the machines was in operation and attracted a great deal of attention. The machines are made by Mr. Thuresson himself, one of them after the English and the other after the American pattern. Littler, Maw & Co., of Dundas, had on exhibition a fourteen feet screw cutting machine and a large wood shaving machine. Paxton, Tait & Co., of Port Perry, exhibited a Leslie double turbine water wheel, claimed to be the best turbine water wheel made. George Clark, of St. Catharines, showed a wheat separator for mill purposes, also an improved bolt feeder. He claims for the separator that it will separate wheat from the other grains where they have been mixed, and remove from them all chaff and dirt.

In addition to the saws already noticed there was a large display in this line made by James Robertson, of the Canada Saw Works of Montreal, and the Dominion Saw Works of Toronto; also by Messrs. Morland, Watson & Co., of the celebrated Montreal Saw Works. In both of these lots were circular saws with Pike's patent teeth. Messrs. Whiting & Cowan, of Oshawa, showed a splendid lot of field, barn and garden implements, finished in a manner that few imagine steel susceptible of.

Passing further on towards the centre of the Palace, our attention was drawn to a large show case filled with lamps of various kinds, by John Boxall, of Toronto. In the collection were railway signal, switch and car lamps, hall lamps, carriage lamps, etc., all of superior make. Beside them Parson Brothers, also of Toronto, showed a full assortment of coal oil lamps. On the same stand with these W. R. Manger, of Toronto, had an excellent display of japanned tin ware.

Passing further on attention is claimed by a jeweller's elaborate show case, filled with a most expensive and beautiful variety of jewellery, watches, silverware and other goods of the kind, shown by Messrs. G. J. Joseph & Co., Toronto, who manufacture nearly all their stock themselves. In the collection we noticed a handsome lot of Masonic and other regalia, emblems, jewels, &c. Opposite this was the show case of Messrs. Russell and Son, of London, England, filled with a large lot of their celebrated watches, in great variety of style, pattern and material. In the collection was a very handsome gold ring with a chronometer in the top of it. This

was one of a number made by the firm to be sent out from England to Calcutta, as presents to the native Indian Princes. It is set with a number of small diamonds and is certainly a triumph of the watchmaker's art.

C. H. Hubbard, of Toronto, showed a fine assortment of gold and tin foil, with other material for dentists' purposes. Alongside of this was a display of brasswork, steam gauges, steam whistles etc., shown by David S. Keith, of Toronto. Further on were fountains exhibited by H. T. Smith, of Toronto.

Next came a collection of mathematical, philosophical and surveying instruments, shown by Charles Potter, optician, Toronto and Hearn & Co., of Montreal. On the same stand was a large collection of china and earthenware, beautifully decorated in colors. The work of decorating was done at the establishment of Messrs. Hurd, Leigh & Co., of Toronto.

We come now to one of the most beautiful displays in the lower portion of the main building—the furniture. And first of all appear the drawing room and chamber sets shown by Messrs Jacques & Hay, of Toronto, all in walnut, and most beautifully polished and carved. The upholstery work too in green rept, is of the very best class. In the drawing-room set we noticed a centre table, the top of which was beautifully inlaid with several kinds of wood. Besides the sets shown by this firm, there was a sideboard made of mottled walnut, and ornamented with beautiful carvings. On one of the panels of the door is a carving representing Cupid taking aim with his bow and arrow, and on the other he is represented as engaged in angling. On each side of the large mirror is carved representation of a vase, filled with fruit, and on the longitudinal panel immediately below the mirror are two scenes, one water and the other landscape, both carved in relief. On the arch surmounting the mirror is carved a life-like figure of Quæntin Durward, and on each side of him is a representation of Cupid pouring out the contents of a cornucopia. This lot taken together is one of the best ever exhibited at any of our Provincial Fairs. Beside these were a parlor and bedroom set, shown by the Bowmanville Manufacturing Company. They are made of unvarnished walnut, elegantly carved and upholstered in Coltine silk. This is really a rich collection, and reflects great credit on the makers.

W. H. Rice, of the Toronto Wire Works, showed a good assortment of wire cloth and wire work of various kinds. J. India, of Toronto, showed a self adjusting vice for holding bevels, etc. W. Peacock, of Montreal, had on view a splendid assortment of cricketing bats. Indian clubs, base ball bats, bells, rings, and other implements used in field sports and gymnasium. They are of various kinds of wood, and highly finished. The Montreal Rolling Mills Co. exhibited a large assortment of shot from their lead works. W. Millicamp, Toronto, exhibited quite a number of show cases of different patterns, with silver plated frames. He is the only person in Canada who manufactures bent glass cases. N. L. Piper & Son, Toronto, had a large display of japanned goods. The Montreal White Lead Works were presented by full samples of paints and putty. Brownson & Paton, of Toronto, showed a quantity of the same articles. R. Lewis, of London, showed several handsome specimens of stained glass. We noticed one window in

particular in which was a very handsome representation of St. Peter.

Hugh Miller, of Toronto, exhibited a variety of chemical preparations, among them a burning fluid intended as a substitute for the old fluid in use a number of years ago. It is a fluid which is perfectly safe gives a beautiful light, and can be sold for 90c per gallon, while the old kind now costs about \$2.50. He also exhibited a splendid preparation of glycerine for chapped and sore hands, also a superior article of sheep tick destroyer, well worthy the notice of farmers.

J. Scales, of the Toronto Tobacco Works, exhibited a large assortment of Canadian manufactured tobaccos, in several different varieties. The leaf is grown in the United States, but is manufactured in Toronto. A. Harthill & Co., of Toronto, had also a large assortment in this line.

Malcolm Morrison, of Toronto, exhibited a quantity of Quinine ale, manufactured by himself. This ale is said to be a universal tonic for nervous weakness, lassitude and general debility. The Edwardsburg Starch Company exhibited a large assortment of their manufactures in the starch line—a superior article. The Grimsby Fruit Canning Co. had a large display of canned fruits.

T. W. Filer showed Judd & Co.'s improved vegetable union yeast, manufactured at Detroit Mich. Edward Lawson, of Toronto, showed a handsome assortment of confectionery, cakes, and biscuits.

In harness there was but a poor display made. The principle exhibitors were T. Staunton, of Toronto, Philip Young, of New Hamburg, and Gardner & McKee, of Brantford. H. A. King, of Hamilton, showed a fine assortment of whips.

In Canadian manufactured woollen goods there was a fair display.

The Cornwall manufacturing Co., showed a lot of their famous blankets, equal to any of foreign manufacture. D. Clark, of Kingston, showed a lot of flannels and blankets. Messrs. Barber Bro., of the Streetsville Woollen Mills, showed a splendid lot of Canadian Tweeds. Gault Bros., of Montreal, showed a capital assortment of Canadian Tweeds made at the Sherbrooke Woollen Mills. These tweeds are among the best made in Canada, and while being equal in finish to any English goods, are much superior to them in durability. In flannels there was also a good display by Willett, of Chambly, and Lomas, of Sherbrooke. W. J. Ratse & Co., of Ancaster, showed a good assortment of woollen yarns.

R. W. Cowan Montreal, had a large assortment of ladies and gents' furs; also robes. This was the only lot of furs on exhibition.

Armstrong, McCrea & Co., of Guelph, showed a large assortment of woollen yarns and ladies and gents' woollen underclothing. There are good displays in Canadian carpets but we could not ascertain the names of the exhibitors. Charles Boeckh, showed a splendid assortment of brushes, every kind of brush in use being found in his department and manufactured by himself. H. Ferdinand, of Waterloo, showed a splendid assortment of sleigh robes, buck, kid and fur hats and gloves; also, dressed skins. John C. McLaren of Montreal, showed a quantity of leather hose, belting and a general assortment of harness, shoes and sole leather. James Wilson of Mitchell, Peter King of Fergus, Whally

& Wood of Montreal, Bowman & Zinken of St Jacobs, Wm. Kerr of Fullarton, W. L. Kinmond & Co. of Montreal, John Hewer & Son of Guelph, and R. Comarant of Montreal, all exhibited in this line W. L. Kinmond, in addition to leather showed a patent steam engine and pump packing, and a non-conducting hair and wool felt for covering boilers.

Nelson Wood & Co, of Toronto and Montreal exhibited an assortment of corn brooms and dusters of their own manufacture. James Thompson of Toronto showed a handsome bagatelle table. J. A. Glendinning of Toronto, showed a very handsome pleasure boat, made of Canadian cedar.

R. A. Novree of the same place had also a nice family boat on exhibition. Philips and Oliver of Toronto, had a quantity of new patent washable gilt mouldings, Ludson & Barnett, of Toronto, were represented by a couple of handsome trunks.—The Upper Canada Bible Society, had a case on exhibition the contents of which formed one of the curiosities of the fair. This was nothing more or less than the Bible printed in one hundred different languages, C. J. Palegrave, of Montreal showed a quantity of Canadian Manufactured Type and Printers' Requisites. He had a type making machine with him which he put in operation during the exhibition.

Geo. Blake, of Whitby, exhibited a patent cutting off machine for cutting off iron tubing, shafting, ect.

In stoves a very large display, made by Copp Bros, of Hamilton, who had there some ninety different kinds of stoves and castings. This is a really splendid lot of stoves, embracing every variety of pattern, with all the late improvements. The only other exhibitors in this line which we noticed were the Messrs. Beard, Bros. & Co., of Toronto, who showed a large lot of improved stoves.

The Toronto Car Wheel Company showed a lot of car wheels. This Company only went into operation very recently, but their prospects of success seem to be good. As a new branch of Canadian industry it is to be hoped they will do well. J. McCausland, of the Canada Stained Glass Works, Toronto, exhibited a large and splendid lot of stained glass in the most elegant designs.

John Macoun, of Belleville, had on exhibition a collection of native plants, arranged in their respective classes; also, a large assortment of native medicinal herbs and roots.

Among other things we noticed several samples of sand-paper, manufactured by W. Downie & Co, of Hamilton. This factory, we believe, is the only one in Canada; and competent judges who have used the sand and emory papers made there pronounce them superior in many respects to most of the imported articles.

I plumbers' and engineers' brass work, a good many samples were on hand. J. O. Baker & Bro, of Toronto, showed a good assortment, together with a number of soda water manufacturing machines. Geo. Harding of Toronto, showed a large quantity of plumbers', gas and steam fitters' work, hot water heating apparatus for warming houses or public buildings, bed room sets of water closets, baths and washstands, beer pumps, ect. Collins of Toronto, showed a splendid lot of steam pressure and vacuum gauges. James Morrison, Toronto, a lot of steam gauges and brass work. J. & P. Taylor, of Toronto, the great safe manufacturers, showed several of their fire and burglar proof safes. The appearance

of them should be sufficient to deter any person from making burglarous attempts upon them.

R. Forsyth, of Montreal, showed some splendid marble work, and has this department all his own way; his marble mantel piece is an exquisite production of pure white marble, highly polished and splendidly cut, the carving is of the most ornate and tasteful kind; in the corners of the arch are two beautiful medallion figures, and the pillars are capped with the figures of a human head, terminating in splendid carvings. This mantel piece is valued at \$900.

Messrs. Copp, Clark & Co. of Toronto exhibited specimens of lithographic and copper plate engraving, as did also J. F. Kolph of the same city.

Messrs. Barney & Hevvy, of Springfield Mass, showed some samples of rink and club skates. They are highly finished, and fastened to the shoe by an approved method, dispensing altogether with straps. Alfred Piddington made a very tempting display of wax dolls. Some very good specimens of artificial limbs were shown by James Authors of Toronto, and McLaren & Barber of London. They are of improved pattern and so nearly approach the natural appearance and operation that the one might be mistaken for the other at a superficial glance. The display of stuffed birds was small and only passable.

At the opposite end of the gallery some splendid specimens of blank book and letter press book binding were shown by Messrs Brown Bros. Hunter Rose & Co., and A. Drudge & Co. Messrs. Brown Bros. took the first prize. In the same department Messrs Virtue & Co. showed some beautiful family Bibles and complete works of Bunyan. Messrs. Mitchell & M-Ilroy, of Guelph, showed a first rate lot of envelopes.

A pretty fair display of pianos, organs and melodeons was made the exhibitors being R. S. Williams of Toronto, W. Bell & Co of Guelph, McLeod, Wood & Co. of Guelph, Hintzman & Co of Toronto, and W. McLaughlin of Toronto.

A number of specimens of plumbago from the Buckingham mines were shown. This plumbago has been pronounced by competent judges to be a very superior article. Mr John Trott of Oakville, showed something new in tea and coffee pots. The teapot has two bottoms with a space of about an inch and a half between them, and a small upright tube reaching to the top. In using, the tube is filled with boiling water; the tea is put in the other part of the pot and as much boiling water poured on as desired. The water in the tube and between the bottoms will boil, but the beverage though equally hot, will not boil. It is claimed that by this method only about three fourths the quantity of tea used in the ordinary way of making will be required, and besides the beverage has a superior flavor. The coffee pot is made on the same principle, with the addition of a strainer to keep out the grounds. Mr Trott also exhibited a cheap and simple stove pipe damper, contrived so that it can be adjusted at any angle; also an improved drum heater for stoves.

The Messrs Welding & Blding, of Brantford, exhibited a large lot of earthen and stone ware of a very superior quality and make. Some of their specimens were admitted by experienced potters present to be triumphs of their art. Opposite them Mr. W. Campbell, of Hamilton, showed a large lot

of earthen and stone ware, drain tiles, etc; also, of superior quality. His display attracted much attention, and indeed it was a handsome one.

A. Rossiter & Son, of Toronto, exhibited a lot of brushes of their own make.

A Mr Paldings, exhibited a patent balanced window blind. This invention is very simple yet useful. By raising or lowering a weight concealed in a tassel, the blind is elevated or lowered as required, and remains in *statu quo* so long as the weight is not touched.

Messrs. Eredged & Co. of Toronto, showed a variety of ink manufactured by themselves.

Bright & Mullin, of Brampton, had on exhibition a patent car coupling, a very useful invention.

S. Meadows, of Toronto, showed a Corrugated Silverplated Reflector, the advantage of which is said to be in reflecting a great amount of light with a small expenditure of gas.

As a specimen of art at work we cannot help noticing the energy displayed by the Dominion Telegraph Company, in opening an office in the Palace for the convenience of exhibitors and visitors.

Hearth and Home.

FARMING FOR BOYS.

CHAPTER XVI.

PLAY AS WELL AS WORK.—FISHING AND A FISH-POND.—

A BAD ACCIDENT.—TAMING A CROW.—DON'T KILL THE TOADS.

Though the boys worked faithfully in assisting their father, yet they had a full share of sport and recreation throughout the entire year. It was very far from being all work and no play. They were great hands at fishing with pole and line, and spent many a half-day on the banks of the creeks and ditches in the neighborhood, catching sunfish and cattie, with now and then a good-sized snapper. They knew all the deep and shaded holes along the ditches into which the fish delight to seek refuge from the glare of an August sun, and hence were able to bring home many a dozen at a time.— Though catching the fish was fine sport, yet there was the unpleasant drawback of being made to clean them. This was a dirty job, which Mrs. Spangler and the girls declared they would not do for them, but, if they would go a-fishing, they should clean all they caught.

Over at their neighbor Allen's, the boys on that farm had contrived to make a net long enough to stretch clear across the widest ditch. It was rare sport to go over and help the Allen boys to fish with this net. Sometimes, when the water in the creek was low, they would make long sweeps against the stream, and haul up an immense number of fish. At other times, two or three of the party would keep the net extended across the creek, while others

would get into the water a considerable distance off, and with great sticks would thrash the surface as they waded up toward the net, making all the turmoil and commotion they could. This immense hue and cry would frighten the fish from their hiding-places, and start them off on a run. As the boys approached nearer and nearer to the net, the water was seen to be alive with fish,—some leaping out to escape the net ahead and the boys behind, while some dashed back between the boys' legs and escaped, and others saved themselves by jumping clear over the net, now and then even touching the faces of those who held it. Though large numbers of fish were penned up in this way, yet the fishermen generally made light hauls. By the time they got the net up, the greater portion had made themselves scarce, and then the operation was to be repeated. But even if there was plenty of mud and a small amount of fish, still there was a great deal of fun.

They never did much at gunning, as Uncle Penny was too good a friend of the birds to encourage his boys at killing anything but hawks. On the contrary, he had induced them to imitate the Allens, and to make a number of small boxes for the birds to build in, which he had nailed up against the barn and about the house. It is true, they were rather rough affairs to look at; but the birds appeared to think them extremely convenient, for all of them had regular tenants. Then in the nearest trees they hung up a number of crook-necked squashes, with a hole in the lower end, and these also were all tenanted. To complete the assortment, Tony King one day nailed up a deplorably old straw hat against the side of the barn, and in a very short time a pair of wrens were found in possession. It was a much more homely thing to look at than either boxes or squashes; but it seems the birds cared nothing for looks, but a good deal for comfort. It was cool and airy in hot weather, and hence was in constant demand.

Among other amusements, in the way of keeping pets, the boys established a little fish-pond by scooping out a wide surface of low ground through which there was a lively brook, and by raising a dam at the lower end. This made the water some two feet deep. They had seen in one of the shop windows, at Trenton, a glass globe containing gold-fish, and were so struck with the beauty of the sight, that they resolved to have gold-fish of their own, and therefore went to work and prepared the pond. On going to buy the fish, they found the price was three dollars a pair. But, high as it was, they made the purchase, and placed them in the pond.

It was astonishing to see how rapidly they multiplied; for in a large warm-water pond like this they breed much faster than in cold, deep water.—

The boys noticed that their gold-fish changed color three times,—the young ones being black, then gradually turning to a crimson gold color, then becoming white or pearl-color, and, lastly, becoming white all over. Some, however, did not change at all, but retained their original black. They proved themselves to be extremely hardy, living and multiplying whether the water became very warm in summer, or whether frozen over in winter. In process of time the pond fairly swarmed with them, until the boys enlarged its dimensions, by scooping it out to twice the original size. They frequently amused themselves with feeding them, until the fish became perfectly tame. Bill Spangler, who seemed to be more fond of pets than the others, taught them to rise to the surface of the water by drumming on a piece of board. On such occasions their great broad sides, on a bright summer day, could be seen glistening in the sun all over the pond. They took food readily as it was thrown to them, such as crumbs of bread or crackers, dough, worms, or grasshoppers.

Their pond of gold-fish became so great a curiosity that the neighbors came from far and near to see it, though it never was a source of much profit. Uncle Benny considered it a recreation as well as a study, and about the cheapest amusement that could have been devised. It cost only a little labor to establish it, and was a permanent object of interest.

But their amusements were not always exempt from accidents. One day when the boys were waiting near the barn for the first music of the dinner-horn, Bill Spangler thought he would amuse himself a few minutes, by way of filling up time, with currying up the pigs. Taking up his long stick with the old curry-comb on one end of it, he reached over the side of the pen to begin operations. But he had scarcely begun to scratch among his pets, when his eye lighted on a strange animal squatting down in a corner of the pen. Bill had never before seen such a creature, and did not know what it was. He thought it a beautiful little thing,—about a foot long, of dark color, with whitish stripes running down its back, a bushy tail, and snort legs. Bill gazed and wondered, and stopped currying the pigs. It presently occurred to him that he would stir up the strange animal with his curry-comb, to learn a little more about what it was. So, reaching over to where it lay, he began poking at it quite vigorously.

The beautiful little stranger was very far from relishing this unceremonious kind of treatment, and, making a sudden jump round, presented his tail to Bill instead of his head. This so amused bill that he poked a little harder, expecting another equally funny movement. But, in place of any-

thing to laugh at, the animal suddenly discharged at Bill a stream of something worse than any brimstone he had ever smelt. It seemed to have taken direct aim at his face. The poor boy was half stifled. He thought, at the moment, that at some time or other he had encountered all kinds of loud smells, but was now satisfied that this was the loudest and most terrible of all. Everything around him seemed to turn blue,—his eyes were half blinded, and he began to feel like vomiting. What became of the animal he neither knew nor cared, having worse things to think of. In his terrible distress he set off for the house. The horn had blown for dinner, but Bill had not heard it; and, as to appetite, it had vanished.

He entered the door with his hands over his face, sobbing and crying, and found the family at dinner. Instantly every one dropped his knife, and began snuffing. Then a sudden puff of wind came in at the door, and the whole dinner-party started up as as if they also had had brimstone put under their noses, at the same time uttering all sorts of cries. The girls ran out of doors with their aprons over their faces, and Mrs. Spangler screamed out,—

"Where have you been? What's the matter with you?"

"O, I don't know," replied Bill, crying louder than before.

"Get out of the house!" exclaimed his mother. "What on earth ails you?"

"Not much, I guess," replied the father, quietly, "Fighting with something, I reckon."

"Yes," added Uncle Benny, "fighting a skunk!" and the old man, in spite of the smothering atmosphere that now filled all that part of the house, sat down, and laughed so heartily as to rouse the anger of Mrs. Spangler even to telling him he had better clear out also.

The fact was, every one was glad to get out into the open air without waiting to be told. It was also too true that Bill had been amusing himself with that most dangerous rural plaything, a skunk, and had suffered the terrible baptism which invariably follows the indulgence of such a recreation.—Severe as it is, it somehow never fails to draw forth the ridicule of all witnesses, while it but rarely excites the sympathy of any.

But an onslaught of this kind is experienced by many country boys at some period of their lives. Those who courageously creep under barns in search of eggs are often driven out upon the double quick, feet foremost, by attacks of this kind, getting so much more than they bargained for as never to have pluck enough to risk a second skirmish with such an enemy. Then at night, when walking along a narrow path, or in the open yard around the house, the unseen enemy lies in wait, and instead of get-

ting out of the way, as a civilly disposed skunk should, he spitefully bespatters the wayfarer with a sort of voluntary malignancy, and then takes to his heels,—an example which his mortified victim is certain to imitate.

Uncle Benny, undismayed in the midst of the general family stampede, made out to rally the two boys to poor Bill's rescue. They made him strip off his clothes and squat down under the pump, where they gave him a copious shower-bath. Then, getting him into a tub of water, he underwent a thorough scrubbing with soap, especially his hair, which seemed to have received a large portion of the disagreeable shock. These ablutions did some good, of course, in the way of purification; but they were far from fully repairing damages. As to his clothes, his father said the only thing to be done with them was to bury them in the ground for at least two weeks, and this he did. He professed to know all about skunks, and so the cloths went two feet under ground.

Not one of the family could get a mouthful during the remainder of that day, as there was a general complaint of being sick at the stomach. Even in their sleep that night several of them dreamed of smelling brimstone. Some neighbors who dropped in a few days afterwards wondered whether the family had n't been dining on the worst kind of sour-crust. As to poor Bill, every one gave him a wide berth for weeks, and many were the jokes at his expense. He kept exceedingly shy of the pigeon, as it was now dangerous ground, and called up the most unpleasant memories.

"I'll kill him the next time!" exclaimed Bill a day or two after his shower-bath under the pump.

"Ah," replied Uncle Benny, "nobody seems to have a good word for the skunk. Every man's hand is against him, just as it is against the snakes, and now he has grown to be a scarce article all over the country. It is true that none of us want so dangerous a playfellow, but, then, even the skunk was not created in vain. He has a mission in this world, like ourselves. He is one of the many friends the farmer has without knowing it. If you do not trouble him, he will seldom trouble you."

"I don't think so, Uncle Benny," replied Bill, drawing a long-breath.

"Well," added the old man, "when next you meet one, don't offer to shake hands with him, and you will be safe."

But this little accident taught Bill Spangler caution; and ever afterwards, when going about the premises, he could not help keeping a sharp lookout for essence-peddlers in the shape of suspicious animals with pretty white stripes down the back.

Besides the gold-fish there was another curious pet upon the farm. This was a young crow, which one day fell near the kitchen door, having its wing wounded by a shot. The general spite against the crow would have led most young persons to kill it on the spot; but in this case the girls took charge of it, and coddled it up with extreme care until the wing had healed, by which time it had become almost as tame as the cat, and showed no disposition to fly away. It was a queer sight to observe the crow stalking about the yard among the chickens and pigeons, claiming his share of the good things going round. The pigeons were prodigiously afraid of him, and generally kept at a respectful distance. But though the chickens did not seem to fear him, yet they evidently considered him an intruder, and picked off a feather or two whenever he came within striking distance.

If no great ornament to the premises, yet he proved really useful. He would stalk into the garden, with daily regularity, and took upon himself the whole business of exterminating the squash-bugs, beetles, grubs, and other destructive insects, until all had disappeared. The family never raised such abundant crops of cucumbers and melons as they did while the crow thus stood sentinel over the garden. To the small birds about the premises he was a regular scarecrow; all except the king-bird being very much afraid of him, though he never condescended to attack them. But the king-bird seemed to have an unconquerable spite against him, and would often pounce down upon his back, attacking him so vigorously as to compel him to fly off and hide under a currant-bush in the garden, or in the tall grass around the fish-pond. With boys and girls he was wonderfully intimate. In warm weather he generally roosted under the woodshed, and in winter the girls brought him into the kitchen, where he had a regular roost in the chimney corner; and he would walk up and mount upon it with a quiet gravity that every one was amused at witnessing. The two house-cats invariably got up and moved off to another corner, whenever they saw the crow marching up to his roost. "But such is the character of our common crow. He is naturally a most intelligent bird, and, when kindly treated, can be domesticated without any difficulty.

This taming of the wounded crow was one of Uncle Benny's devices for cultivating the affections, and teaching the boys a habit of kindness towards inferior creatures. He was always on the lookout for opportunities for impressing upon them the duty of forbearance from cruelty or violence to such. He one day caught Tony throwing stones at a couple of toads in the garden, and forthwith ordered him to stop. But Tony replied that they were of no use, and ought to be killed,—he did n't like

them. The old man sitting down on the frame of a hotbed that was close at hand, and telling Tony to take a seat beside him, drew a paper from his pocket, and read to him the following brief lecture, though he did not know the author's name:—

"It is idle to talk about useless animals. All are useful, and many that we despise are necessary to man. Even the common house-flies should be ranked among the best friends of man. All dead and decaying matter, which is most abundant in the hottest weather, is detrimental to human health and life. Swarms of flies rapidly convert this matter into living, healthy substance, and thus purify the atmosphere, and make our dwellings habitable. These ever-busy workers are actually essential, particularly in the dirtiest portions of cities. They destroy immense quantities of pestilence-breeding impurities. Their busy motions pertain to life.—With death come foul odors, which flies consume and convert to life and motion. They are the real sanitary inspectors of our dwellings, and abaters of nuisance. They are under-estimated, and so are all reptiles. The despised toad is one of our most useful domestic animals,—one of the farmer's and gardener's best friends. We should all learn lessons of useful instruction of the toad, and teach our children and servants never to injure them. They delight in well-cultivated grounds, and live long in the same locality, occupying the same nests for many years. Their natural food is bugs and flies which are injurious to the garden. They catch their prey with wonderful facility, by the power they have of shooting out their tongues to the length of six or eight inches, striking with lightning quickness whatever comes within the focus of their two prominent eyes. If one eye is destroyed they lose the power of striking their prey. The tongue is covered with a glutinous substance, which holds every insect it strikes. Night is the toad's time to work. We have accounts of monster toads in Surinam, with mouths like a hog.

"All toads and frogs are insect-eaters, and the numbers they destroy can hardly be over-estimated. They seem to have been predestined for the great work of destroying bugs and insects generally; and as the natural habitat of toads is with man in his cultivated grounds, they are there his most useful coworkers. If not already in the garden, man should collect and carry them there. A few toads in a vine-patch soon rid it of its worst enemies, the bugs. The young of frogs, while in the tadpole age, breathe by gills, under water. After they lose their tails, and become perfect frogs, they are air-breathing animals, and not amphibious. If they dive, it is only suspended inspiration. They must come to the surface for breathe. In spite of all that Shakespeare has said to sustain the prejudice against

toads, they are not poisonous, nor hateful. Our antipathy all comes from faulty education. We should teach our children not to hate, but to protect toads. We should also try to overcome the prejudice against eating frogs. They should be the cheap and plenty food of the poor, instead of, as now, the choice dainties of the rich. They might as well be drawn for food as chickens. Frogs would only need a fit place to live in. They would need no food nor care. If the idea of cultivating frogs is thought absurd, it is not more so than the idea of sending ice to the tropics was thought to be a few years ago. It was made to pay; and a frog-pond as well as the ice-pond may, and frogs should be an article of food in every market."

Then, turning over to an other page, he read the following:—

"Our ugly friend, the toad, affects gardens as much as the lord of creation. You will find him in a hole in the wall, in the strawberry patch, under the squash-vines, or among the cucumbers. He is not handsome, but serene and dignified as a judge. He executes judgment upon all bugs, worms, snails, and pests of the garden in the most summary way. See what a capacious maw he has, occupying the whole space from his forelegs to his haunches. He is the very incarnation of stomach, and his gastronomic feats would do credit to an alderman.—He tucks away bugs and all kindred flesh as an epicure would turtle and pudding. He is never full. That maw stretches like caoutchouc, and he is nearer to having an endless gullet than any other reptile. He is altogether too useful to be without enemies. All the serpent tribe hate him, and devour him when they can. Even man slanders him. He misses a few strawberries from his patch, and lays it to the toad, who stands like a sentinel guarding his treasures. It was the snail who did the mischief before the toad took up his station; fortunately, he is now where he will spoil no more ruddy fruit.—Or it was the robin who slyly snapped up the berries, and flew off into the neighboring tree, leaving the poor toad to bear his sins. But you see by the look of his honest face that he is guiltless. Those lustrous eyes are above stealing. One fat bug would give him more pleasure than all the fruit in your garden.

"Cultivate the friendship of toads, for they take the insects that the birds are apt to overlook. They inspect the ground closely, peer under the leaves of strawberries, under the growing vines, and nab every creeping thing in sight. They are as easily domesticated as birds, never sing when you do not want them to, are quiet and unobtrusive, and, if not worth five hundred dollars apiece, are still profitable pets and fellow-helpers. Birch the boys that teases toads."

ONLY A WORD!

A frivolous word, a sharp retort,
A parting in angry haste,
The sun that rose on a bower of bliss,
The loving look and the tender kiss,
Has set on a barren waste.
Where pilgrims tread with weary feet
Paths destined never more to meet.

A frivolous word, a sharp retort,
A moment that blots out years,
Two lives are wrecked on a stormy shore,
Where billows of passion surge and roar
To break in a spray of tears—
Tears shed to blind the severed pair
Drifting seaward and drowning there.

A frivolous word, a sharp retort,
A flash from a passing cloud,
Two hearts are scathed to their inmost core,
Are ashes and dust for evermore.
Two faces turn to the crowd,
Masked by pride with a life-long lie,
To hide the scars of that agony.

A frivolous word, a sharp retort,
An arrow at random sped,
It has cut in twain the mystic tie
That had bound two souls in harmony,
sw et Love lies biggling or dead.
A poisoned shaft, with scarce an aim,
Has at once a mischief sad as shame.

A frivolous word, a sharp retort,
Alas! for the loves and lives
So little a cause has rent apart;
Tearing the fondest heart from heart
As a whirlwind rends and rives,
Never to reunite again,
But live and die in secret pain.

A frivolous word, a sharp retort,
Alas that it should be so!
The reticent speech, the careless tongue,
Have wrought more evil and done more wrong,
Than have brought to the world more woe
Than all the armies, age to age,
Records on history's blood-stained page.

Music.

SILVER FOUNTAIN.
A BEAUTIFUL HOME.

1. There's a beau-ti-ful home for thee, brother, A home, a home for thee; In that land of bliss where
2. There's a beau-ti-ful rest for thee, brother, A rest, a rest for thee; In those mansions a-bove where

CHORUS.
pleas-ure is, There, brother, 's a home for thee, } A beau-ti-ful home for thee, brother, A
all is love, There, brother, 's a rest for thee. }

3. There's a beautiful crown for thee, { In that land of bliss where pleasure is, There, brother, 's a home for thee.
A crown, a crown for thee, } In those mansions a-bove where all is love, There, brother, 's a rest for thee.
When the battle is done, and the victory won,
Our Saviour will give it to thee.
Cuo.—A beautiful crown for thee.

4. There's a beautiful robe for thee, 5. Will seek that beautiful home, broth-
brother, That home, that home above, } er,
A robe, a robe for thee; In that land of light, where all is
A robe of white, so pure and bright, bright,
A glorious robe for thee. That land where all is love?
Cuo.—A beautiful robe for thee. CHO.—A beautiful home for thee.